

HOME COMPUTING WEEKLY

A PLUGGED-IN PUBLICATION

April 16-22 1983 No. 108 £2.95



Amstrad
special



Sound, adventure
and graphics
on your CPC464



Your chance to win
£1000 of hardware
from

AHTER



MTX 312 — Now runs
Spectrum software

Now software's on the cards!

Software on a card is now available from the Japanese company Ahter International.

Plans for the first disk in the Compati Japan collection, the credit expansion, plastic boards can hold a complete program and load it instantly into the computer.

The card does away a parallel port and is currently available for BBC machines, Acorn 3000, Sinclair QL and Spectrum 16/48.

One major feature is the card's ability to contain a whole range of options within the format. The first cards all contain 64K ROM-based memory, 16K RAM-type cards, which can be programmed and then erased, and battery-backed RAM cards are also on the pipeline.

Initially, the cards have been used in market games. All of April's production — some



A Memotech software card and BBC Micro 3000 cards — has been brought by a private manufacturer who will be supplying interfaces on the cards in order to give a quick change.

The cards seem almost all damage. They don't bend

easily, they aren't damaged by heat and they are not water sensitive either. The only thing which may reduce usage is the price.

The adapter is very cheap — about £5 — but the credit will probably be nearer £20 in their current form. A number of British software houses have already shown interest. Accord and Ocean have seen the unit and are awaiting a trial. The GST is to propose an adjustment for the Sinclair QL and the Commodore version at the winter show week.

One advantage for software houses is the difficulty of copying software from the card. A number of ways this can be programmed to make the software unacceptable.

There is no doubt that the cards work. We have seen them being used on an MSX machine and they load in under five seconds. What remains to be seen is if the price can be made attractive enough for the big software houses to accept Ahter cards as a way standard for software distribution.

Spectrum games on Memotech

Memotech is producing an adapter for the MTX 312 computer which will enable it to run commercial Spectrum software.

Among the home and education markets, the next computer looks a hardware and software hybrid, which means it loaded before you can run Spectrum programs.

The MTX 312 contains the Spectrum ROM and very little else. Each tape will have the conversion code required by 26 games and a number of other

format tapes are being developed.

"We have been trying very hard to get software houses to produce Memotech software for them," says the president, "but they haven't taken the gamble," commented Tim Stevens, Memotech UK sales manager. "We have lost sales by not having the software and the project should help us to regain that situation."

The software will probably cost about £20, with each tape costing £5.

Inside your
bolder,
brighter,
better HCW...

Seiko RC-1000
Time for a
change

Formula for
success?
Joysticks
reviewed

Here's
Woody
See
page 3



Star profile
Craig Thomas
author of
Firefox

COMBAT LYNX

Brian DURELL

(Technical Support from
Westland Helicopters)



Spectrum-Commodore 64-BBC Electron-Amstrad
The ultimate flying experience



AMSTRAD



BBC/ELECTRON

DURELL sales dept..

Castle Lodge, Castle Green, Taunton, Somerset, TA1 4AB

HOME COMPUTING WEEKLY

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1000

It is always nice to read lesson from others.

"We got the chance to make the program better by including all the ideas and suggestions that those letters contain. We like to hear of your successes and difficulties with

programme and games.
There is one kind of lesson we
can do without, however — no,
not those from the past, but
those giving the catalogue of
the various subjects.

We have had a number of these recently but we won't be producing any more. We try to cover a large range of computer types. All have their pros and bad features and people buy the one that best suits their needs at the time.

No please let's not have any more losses of that type. We need your high scores, please for help and encouragement. We will need a place to all those whose names are printed, so why not write them down.

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SPECTRUM

Book by book – [www.oxfordtextbooks.com](#)

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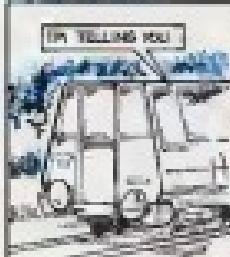
Coming Soon...

- Return of the Young Car
men — see 199
 - Primary process for the IGC
 - Followed by seven more pro-
cesses

Argus Spectroscopic Publications Ltd
No. 1 Cheltenham Avenue, London NW1 3BH, UK 01992 5022

most frequently measured in patients with hypertension. Endothelin-1 has been shown to increase vascular tone, contract smooth muscle, and inhibit nitric oxide release. Plasma levels were significantly higher in the hypertensive group than in the normotensive group at all time points.

BASIC LIVING



Aktivparty

Our Government's Budget on Broad Street Committee caused confusion between the miners. A good meeting turned up that the State Senate is in New York.

- 1. Where are the savannahs?
 - 2. Captain Cook was a famous
British explorer.
 - 3. London is the name of England's
capital city.
 - 4. David Livingstone is a famous
African explorer.
 - 5. The Beatles were John, Paul,
George and Ringo.
 - 6. Paul was born in Liverpool and
Linda McCartney married to the
Beatles' John Lennon.

The members of the album,
including and past or
late, include: A. C. G., Eddie
J. F. Edwards, Tommie, Terry
Dowell, Thomas, Wm. West,
and others.

Journal kept each year a copy
of the grants. The books
showed that the first grant
was made in 1850, and that
the last grant was made in
1860. The grants were
as follows: 1850, \$100;
1851, \$100; 1852, \$100;
1853, \$100; 1854, \$100;
1855, \$100; 1856, \$100;
1857, \$100; 1858, \$100;
1859, \$100; 1860, \$100.



[View Details](#) | [Edit](#) | [Delete](#)

Satellite Link - 2

Schools in Britain will soon be able to send anything mail to the *Star Wars* Empire.

The shop at the base of Open Arms Ranch, an environmental education and exploration project for young people. It has a full computer room with video tape cameras and a VCR.

The men will soon be joined by Leah Beach, a representative of the Times Newark Bureau.

which will be able to follow the progress of the expedition and can also question the members.

Lakin is a welcome addition for Trieste Gold and will work in the upper-middle-class areas of the San Walter Raleigh. He is a qualified drug distributor and will be among the standing expenses. It is hoped that some unclaimed wrecks will be found in the Caribbean.

River Network, P.O. Box 2, 200
Gangs River Rd., Leavenworth WA
98546

Rent-a-pool

Rate of yourself between pages
10 to 1000 as a reader very
good

The new Quality service and the Member receives the usual of a page or sequence of items for their news, messages, photos, pictures or anything.

The only restriction, apart from reasonable decency, is that the pages must not be used for commercial sale and this rule will be严格执行ed.

As in most oil wells per gauge for
a "standard" well, of 1000 ft. of horizontal
stratification. Average total flow,
1000 ft. x 1000 ft. = 1000 cu. ft.

negative and negative tone from age 10 to 18.

To update your page you need to complete a review frame. These will be reviewed and the modifications made usually within 24 hours.

You will be able to contact friends, share jokes and even make your software available to other users. It's like running part of a journal. Everyone can see it but a message can be moderated by a selected few.

The service is due for inspection
on June 1.

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Software update

Melbourne House is taking steps to "fix the software" — and that's more along the lines of "fixing" well done for certain games when the Holden and by-products," suggests Melbourne House.

Traveling back through time, you explore 240 years in a game of strategy and 3D animation.

A new game in the classic Total War is *Assassins' Way*. John Wiley, the book publisher, is based in Chichester, and this moves into software for schools, emphasizing the facilities and capabilities of the Australian branch of the company.

Designed for children in the seven to 11 years age group, the initial range of six titles in other genres, at £4.95 and £5.95, will be *Roll Away River*, *Quick Change Company*, *Gold Digger*, *Blind Messenger Hand*, *Cave and Burrow* and *Sleepy Dog*. One of the aims of the games and future plans include a word processing package and computer schools applied media programs.



Title	Developer	Platform	Price	Publisher
Assassins' Way	Wiley	PC/Amiga	£2.95	Holden
Super Harry	Spirax	PC	£7.95	Melbourne Hse
Grandmaster	CIB	PC	£8.95	Holden
Mystery of the Java Star	Amstrad	PC/Amiga	£7.95	Holden
Crashdown	Spicysoft	PC/Amiga/BBC/	£9.95	Shane
Time Tracker	Electron	BBC	£7.95	Holden
Arrowsick	BBC	BBC	£9.95	AGM
Poo Man	Arctech	Amiga	£9.95	Holden
Dig-Dug	CIB/Asian	PC/Amiga	£9.95	Holden/US Gold
Mr Do'	CIB/Asian	PC/Amiga	£9.95	Holden/US Gold
McElli Giga Beverage	CIB	PC	£9.95	US Gold
President	BBK	Amiga	£7.95	Holden
Spy Hunter	Spectrum	PC	£7.95	US Gold
Ice-Block Jack	Amstrad	PC/Amiga	£7.95	English
Beavis & Butt-head	Spectrum	PC	£7.95	FBI
Knight Lore	BBK	Amiga	£9.95	Ultimate
Roll Away River	Amstrad	PC	£7.95	Holden/Wiley
Cave & Burrow	PCG 20	PC	£5.95	Double Disk

New joysticks

Chicxus has recently launched two new joystick interfaces, a Spectrum controller cable, a range of joystick connectors for and two serial products.

The joystick interfaces are designed to work with Apple-style joysticks and are available in black case to match the machine. Some of the joysticks provide a further rate controller so they work in pairs. Price is £14.95 each or £24.95.

The controller cable costs £7.95 and allows joysticks to be used away from the computer. The Hi-Digit 3in serial interface cost £12.95.

The new joy stick which allows two serial inputs to the system and simple connection between them. The extension lead is £1.95. Chicxus is making a new model to use joysticks at a non-factory address.



Einstein gold

Communications with Venezuela is at the core of the latest product for the Business from America.

The package allows the micro to be used to access Project Telecom Gold and user bulletin boards.

At £199.95 for the software, a home computer as yet still needs to buy a modem and have a telephone line for the services that you are to use.

Karen, 12 Newmarket Park, Pangbourne RG8 7JW

Service with a smile

If your Restaurant's on the Web and you need it repaired urgently — and you happen to live in the Gloucester area — now you can take it to a while you wait computer repair service.

Video Vault provides instant repair, whether you drive by with your Spectrum or post it for same day service. Video Vault has a fully computerised ordering system, so items can be issued promptly — and there's a standard fee-on-call rate of £18.95 per computer.

Video Vault, 148 High St West, Gloucester, Gloucestershire

NEWS



British school explores the world

Sinclair's solstice

Sinclair's pack into new market overseas consisted of educational software, mainly when a number of educationalists visited. He arrived by the British Council to Sinclair's house in Cambridge. A few more visitors in schools with children from Thailand and the USA will be invited

from School in Robertson tomorrow when the children demonstrated the Spectrum + software developed with Sinclair.

One a member of the Russian delegation stayed on to have further discussions with Sinclair.

Software Research 30 St Albans Rd, Camberley, Surrey GU11 2JL

Come on down!

AirTouch launched its range of sets with a massive public meeting in London's Harrods last week. It's set to continue with much promotion, with a £100,000 budget for its first year.

and the end of the year.

These are two aspects to AirTouch's campaign, a CD-ROM game for a Commodore 64/128, and a diskette version for personal computers who buy a AirTouch

modem, Britain's best-selling and most popular 1000 baud modems. The CD-ROM game costs £29.99, and a diskette version £19.99.

AirTouch, AirTouch Ltd, Polaris St, London NW1



Bragg: "Computer catch this before I drop it!"

Spitfire

40



THE BEST THING SINCE THE REAL THING

A Spitfire flight simulation set in 1940. Ground battles and realistic air combat.

Spitfire 40 is available from W.H. Smith, Boots, Spectrum and good software stores everywhere.

MICROSOFT

Microsoft® Windows® Microsoft® CD



Britten-Norman Islander (SP) © 1992



The Hawker Sea Fury © 1992

A VERY SPECIAL COMPETITION

Target: To run through the ranks of the RAF sites to Group Captain, VC, DSO, DFC.

Rewards: For the lucky few, a day out at the Battle of Britain Museum, plus a test flight in a high performance aircraft. Details in every *Spitfire 40* pack.

COMPUTERS & GAMES
1992 £12.99 Cassettes

Dave Carlos talked to author Craig Thomas about the role computers play in his latest thriller, Bear's Tears.

STAR PROFILE

Becoming a computer expert overnight is a topic covered in Craig Thomas's thriller "Thomas at the Source of Five", now released as a film starring Clint Eastwood.

If you read reviews on a regular basis like the others are that you will have heard of Craig Thomas. His most recent novels with a spy or military theme, "Bear's Tears", published by Michael Joseph, is the first of his novels on which the computer plays an integral part.

"Bear's Tears" describes the fictional framework of a top British spy master and the struggle of old friends to clear his name and expose the real KGB agent.

I asked Craig Thomas why after seven novels, he decided decide to include a computer theme in this one.

"Craig admitted that he isn't a computer user at all. "I used a telephone answering machine my wife got for the computer section this was plausible." The technology is only ever a hook in a novel of this kind, you have to be careful never to let it take over or it will become a lecture for the reader, and I have great reservations about that."

"I don't even own a word processor to help me write," he went on. "This is because I find that the experience is just one step from the craft and the job. I have looked at word processors and seen how they might help me to write, but I have never taken the plunge. At all the pleasure of publishing a book could be taken from happy days than if I would buy one tomorrow but, publishers will take more power."

The hero of our book is a mysterious Australian spy called Hyde. He has the task of breaking into the KGB's master computer to gather information to then be passed to him by friend David. But just one night later Hyde is an FBI computer whiz who has to use his skills to break into the Russian Embassy to a mysterious test message.

I asked Craig if he thought that were really possible and he admitted that it was unlikely but there is a chance that Hyde could have got the information he needed.

The book has been set in the past. Michael Hyde is using the computer someone in Moscow is watching his every move and he is connected on

periodically whenever he moves from the Soviet past. This adds a little element to the story and keeps you on the edge of your seat.

The computer is by no means central to the book but it does provide added interest. "The computer is used as a major stimulus only," Craig Thomas explained. "There could have been many other storage systems for using a computer, giving the ability to store a great deal of information easily. Word, or whatever form it occurred in the end too. All Hyde has to do is break it down in London and take it amongst trustworthy people."

This isn't quite the case however, as the rest of story depends more upon the feelings of the head of Hyde security for one of the characters than upon the power of the computer itself. "To have denied the computer would have added further complications," Craig admitted, "and I prefer the outcome to happen upon the personal rather than the technical."

He continued: "I used a friend who still computes on the computer as source. I wanted to do two things with this book. Firstly I didn't want to confuse non-technical readers who have never used a computer before and, secondly I didn't want spectators to be able to pick

holes in the plot."

"All research should help further the濶e of the story, but it can on occasions become so, and so well, and the damage the more." I think Craig will be the ultimate efficiency. There is no doubt of the reduced interest about the book but the computer sections are detailed enough to be readable.

"I would like to write a novel about computers and computers in a serious way but I just have to come up with an idea which involves them more fully," he said. "Most people are afraid to go to detective areas of mystery. They don't really help the writers of an action novel. In some of those stories the characters are stuck out everything without going to the computer. This is a real problem to an action story."

I can't help but wonder, after reading this book, if the modern spy needs to keep out of the office at all. Walk off the information floating around the streets and wandering down the telephone lines. If a computer is computer package will we need a more full of computer hackers breaking into the systems and taking all the information they want. Is certainly possible," says Craig Thomas with his book, but it might make life less risky for the spooks of MI5.



SOFTWARE



Formula One

A type of Football Manager on wheels, this game is non-competitive, since you need to race the world's racing circuits. This could be up to six players via telephone, utilising a one or two-person team competing in this simulation. You receive sponsors' money to improve your drivers, cars and pit crew. The object is to win either the Drivers' or the constructors' championships — or both.

The loading screen asks you to LOAD a SAVING game, then how many players before asking you which level of difficulty you want, and to enter your name. Then there's a choice of six cars, numerous sponsors and drivers. Thus, using the sponsor's money, you can buy new engines, chassis and tyres and upgrade the car's aerodynamic efficiency.

Before each race a screen gives a full record of the track's history, and the weather forecast — so that a choice of tire types can be made. The cars' lap times are shown and then they line up at the grid, the lights change and — they're off, with the benefit of the crowd cheering as cars zoom around the track.

Scoreboard displays lap numbers, position and car numbers as well as distances in miles, and screen bottom shows a constant commentary on weather, weather changes, pit stops & laps during which each player must control the crew, and so on.

The commentator panel — having a go — is worth noting. An impressive addition which needs the strong Fidelity T.W.

Price: £7.95

Publisher: CRL

Address: CRL House, Pinner Way, Corporation Rd, London, E12 5HD

SPECTRUM



MAX Sharps

As the title suggests, this game involves three immensely popular BMX track courses popularly known as BMX tracks.

The object is to get from the start of a BMX race track, avoid certain obstacles and finish in a respectable time. If all this is achieved and you score a better than the qualifying time you move on to the next section.

Control is by joystick and speed is achieved by pressing the fire button. The faster you fire the faster the bike goes. This proves difficult to understand on certain sections.

The graphics of this game are generic, good with a variety of possible options but the tracks which go in the way are rather average looking, more like coloured shapes.

As far I think this sounds decent but the game was somewhat bad if you have really poor eye hand co-ordination as the bike ends up on its side.

An interesting feature at the last race there is only one race at any given distance so if you had just four laps of the 100 yards of the race again it's likely this isn't an article machine!

J.B.

Price: £7.95

Publisher: JRCsoft

Address: The Workshops, 23 Church St, Eastwood, Nottingham

C64



Death Star Interceptor

Based on the space battles in Star Wars, Death Star Interceptor is a technically impressive game which falls down on playability.

The first point of how can tell is that, though, provides launching your X-wing fighter through a series of ten levels of a cockpit, but as a few seconds to have to go through each game, as the control of pressing a body button that launched you head the course space, with the Death Star and lots of small targets were in the background.

Some of these were then kept in mind and grow larger, developing a sort of alien wave of attacking the fighters — a very uninteresting part of graphics, but I found shooting at them along very difficult as you can't seem to hit the left and right whatever you shoot in either direction.

If you enjoyed all this, you may no longer care of the game — the travel, shooting and shooting to avoid the Death Star's defences is really graphics, even on the lowest skill level, and the moving projectiles graphics are excellent with most of the flicker that often makes games.

My only real criticism is that the keyboard controls aren't very friendly. For a start, the 'Down' button (Q) is actually above the 'Up' button (A) which is a bit odd. And, the more power that doesn't suggest more defined controls, the less chance means that the player's right-handed, which I'm not, and so I found it very hard to play.

G.J.

Price: £12.95

Publisher: System 3

Address: South Bank Hse, Black Prince Rd, London SE1 9

SPECTRUM





The Dukes of Hazzard

The familiar theme song starts the game, which quickly heats up to the silvers not worth the price. Some passing friends seeing the same patient and take more time to play it... but were soon forced. One reason is that there's no choice of changing the level of difficulty.

The Dukes own Boss Bling \$1,000 and have to carry it at all times, so Bo and Luke enter the Annual Hazard Cross Country Race to win the cash. Unfortunately, Bo, Hay and the gang Hazard County Police Force are out to stop them.

Starting from the Duke boys' house you have to drive the General Lee along the country road to the start of the race. Kuzco II - Colossal is behind you at the start, aided by the Hazard Air Wing in the shape of Jeffers in the biplane, John as a massive mosquito and Curtis as a balloon. You start in a station wagon and Boar is supposed somewhere.

The limited graphics are very well done, the sound is simple but effective and machine code ensures a smooth movement of the vehicles and vehicles. The score button has score, time and bonus. Above, are the road, grass, mountains and clouds in the sky.

You can choose dynamics as the approaching vehicles, change lanes and jump, but we were unable to avoid other drivers or missiles from above. Then the General Lee sides over and is taken away by a tow truck.

T.W.

Price: £19.95

Publisher: Game Systems Ltd,
Address: 22 Bradford Street, Macclesfield SK10 4DN.

SPECTRUM



Hyper�abyrinth

The program as described in the cassette notes is based on some sort of a 3D space chess game, which rather suggests that it is aimed at children, and that there may perhaps be an educational element to it. There isn't — or at least, of course it's not so heavily disguised that I didn't notice!

Hyper�abyrinth is an arcade game which involves clearing an assortment of mines around a pointed, arrow-shaped maze which is supposed to represent a newspaper, shooting as many as possible. It's quite difficult, the more fire you add to the road, and it would be a challenge to work out a route which cleared all of it, without having to scratch out and destroy the arrows.



The game is preceded by a colour title screen, the pattern for which is printed on the back of the cassette itself, rather than on a separate card, which I thought was a good idea as it's too likely to get lost that way. There is an optional connection required at the start, then you do normally see the start/run up menu. If you're lucky, that is. More often than not, the program crashed before I had got that far, and I never actually succeeded in launching a game before the screen went black.

The graphics and sound are pretty good, and I think I would probably have liked better control if it hadn't crashed so often, but as it was it got more frustration than pleasure from it.

M.N.

Price: £19.95
Publisher: Allgame
Address: 1 Orange Street, Sheffield S1 4DN.

C64



Aqua Racer

Well, it didn't take much imagination to come up with this game's scenario. It's simply a Pole Position-type race against the clock, using power boats instead of racing cars. Somehow I don't think this one will make for chess.

There are 20 courses to choose but the variations are rather limited. I am bound to say I'd explored more than a third of them. The real downside to the courses is probably in "pit stops" where you have to leave the course to yourself. I found this the best bit of the game because in "normal mode" there are other boats circulating along the narrow path course on passing or going over. One needs, and you will, go fully beneath the water. Don't worry, it's not fatal just a time penalty. You surface and plough on.

Personally, I spent too much of my time waiting for my boat to reappear. What you, the "demos mode" liked for were in fact for a demo, it was a joke. The computer-controlled boat seemed good at avoiding the obstacles of every other boat that appeared.

What can I say in favour? The graphics are good, if lack-lustre, there is a 1-player option — but at £6.99 it doesn't look particularly good value for money. Most of the big software houses seem to be changing to releasing fewer but better games. By the look of that, though, Dan hasn't adopted this policy yet.

R.J.

Price: £14.99

Publisher: Double Disk
Address: 27 High St.,
Ludlow, Shropshire, SY8 1AB.



C64



★★★★★

Flipped



★★★★★

Hooked



★★★★★

Kean



★★★★★

Yawning



★★★★★

Comelace



Super Harry

One of the most interesting types of game played on computers must be arcade simulations — a well written program can give you many hours of really involved playing. Super Harry is a helicopter simulation and as my opinion is far better than many other flight simulations on the market.

There are four programs included which use the same helicopter interface. Each has a different mission and will hold your interest for a long time.

The seven levels are in groups of what you would see from the cockpit, clearly as if you were in the pilot's seat. The on-board computer will let you enter various commands to help with your mission, as given right at first, finished instructions and various weapons. All the computer readings are shown at adequate detail and are very realistic.

The graphics are absolutely amazing — they have to be seen to be believed. The road and aircraft in very fast, objects on the ground are solid and carry quite a lot of detail so you feel like one of the flying team.

There are excellent sound effects which match all the actions of the helicopter, you will never hear a simpler programme if you should crash and blow up.

Although the price may seem high at £19.95 compared with other games, this represents extremely good value for money. It is a well written program, has a very good manual and is extremely addictive to play.

E.I.

Course of Jezzball

This disc game is a companion to *Defenders of the Earth*, from the same supplier, and stars the same characters, Parrot and Wormie, with a different set of objectives to explore and puzzles to solve. The correspondence between the games is very striking, there isn't much to choose between them, but I think this is marginally the better of the two.

There are supposed to be 36 different areas for Parrot to explore as he tries to find the Diamond diamond. But I only managed to reach about a third of those before running out of strength. Each room has a number of hidden rooms for you to discover by carefully probing the walls. The objects to be picked up are not visible until you walk over them, so it is important to explore each room thoroughly when you first play, but as these locations do not change, if you draw a map — not an easy task, as the layout is quite complicated — you can skip the boring bits in subsequent games.

The graphics, sounds and animated colour batches are the major problem. You have to use the function keys to switch between shield, arrow, fight and ride modes, and if you caught me a moment in the wrong mode — all too easy to do — your strength dissipates with alarming speed. Knocking off the edge of a screen and back again is a good technique for getting rid of unnecessary obstacles.

If you enjoy graphic adventures, and you have a disc drive, this is a good buy.

M.M.

Pilot 19-95

Publisher: U.S. Gold

Address: Unit 10, Falcon Industrial Centre, Dagenham St., Birmingham, B7 4LY

Publisher: Quicksilver

Address: Palmerston Park, 13 Palmerston Rd, Southampton SO1 3LL

C64



Pinball Wizard

This simulation of a pinball machine embodies many of the traditional features found on the real thing.

Strangely the game has not been spiced up, so there is no life to the shape of the screen. More realism could have been provided by naming the pins individually.

Consequently the ball can take very few routes and the whole game seems to run faster than the general purchase I have used. Even in the best of five games it still seems a bit too easy.

However the graphic representation, although not particularly smooth or consistent of the ball, makes the game very playable and the bonus feature provides quite a challenge.

If you are at all fondness about wanting real value for money then purchase for £14.95. At almost £20 per game (£19.95 + £1.00 for the manual) the Spectrum version is a rip-off.

You would be forgive for expecting a far better version. After all the Amstrad has many unique advantages which are ideally suited to this particular programme.

Imagine the three round channels all adding their dimensions to the excitement — now of a thought all these static and variable banking into dazzling you with an ever-changing screen display — now of a "What about the weapons and the interplay" and — oh well, I'd go on!

But, you've passed it, you've had fun, you've won, now an Amstrad programme is all.

Why are so many software houses prepared to ignore these wonderful facilities and still produce cheap games as though a programme developed to cross Commodore 64 BASIC had been painstakingly produced? B.H.

Pilot 19-95
Publisher: U.S. Gold
Address: 10 Alexander Rd, Birmingham, B7 4LY

AMSTRAD



Answer Book — Sport

I must confess I didn't like the idea of a quiz on the computer. Most of them are very unimaginative and often lack invention. The limited nature of any division of questions is usually another drawback. That, I'm pleased to say, does not apply to *Answer Book*.

Finally, I was amazed at the size of the database, 26 lots of 50 questions. Some of the subjects included were Cash Football, Maths of Sport, Cricket and more! Just about every sporting fancy is taken care of if you include the catch all, Put Luck — which has nothing to do with cricket!

Consequently the ball can take very few routes and the whole game seems to run faster than the general purchase I have used. Even in the best of five games it still seems a bit too easy.

However the graphic representation, although not particularly smooth or consistent of the ball, makes the game very playable and the bonus feature provides quite a challenge.

If you are at all fondness about wanting real value for money then purchase for £14.95. At almost £20 per game (£19.95 + £1.00 for the manual) the Spectrum version is a rip-off.

You would be forgive for expecting a far better version.

After all the Amstrad has many unique advantages which are ideally suited to this particular programme.

Imagine the three round channels all adding their dimensions to the excitement — now of a thought all these static and variable banking into dazzling you with an ever-changing screen display — now of a "What about the weapons and the interplay" and — oh well, I'd go on!

But, you've passed it, you've had fun, you've won, now an Amstrad programme is all.

Why are so many software houses prepared to ignore these wonderful facilities and still produce cheap games as though a programme developed to cross Commodore 64 BASIC had been painstakingly produced? B.H.

Answer Book — Sport
Publisher: Quicksilver
Address: 10 Alexander Rd, Birmingham, B7 4LY

EEC





Sprite Machine

This Norwegian package is intended to provide a creative system for the creation and manipulation of sprites.

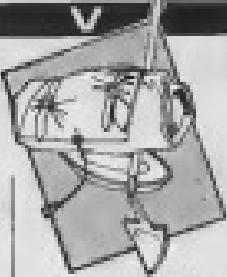
The program TURBO LOADS and on running gives the usual editing screen. The majority of the screen is taken up by a grid showing area. The controller gives the cursor to you and a 3D line representation of the sprite currently under definition. By moving a cursor around the editing area, you can draw your sprite. By pressing Alt the cursor changes into a selection mode. The keys of the keyboard take care of the functions of colour as the mode and width of the sprite.

A wide range of commands are provided covering the scaling, stretching and rotation of the object. By using a key command you can step through the sprite, change and even change. The package allows you to copy up to 100 shapes, which should be enough for anyone. Once you've completed your design, they can be saved as a data block, or converted to DATA statements.

To simplify the creation of animated sequences, you can run through a specified sequence of designs at the speed of your choice. If you want to create complex and enclosed designs or not have graphical tools, there is no problem made. This allows you to superimpose all eight sprites on the same spot.

Overall this is a well designed package which complements a colour job well. A character driver would have been a useful addition, but the package does stand well to it.

A.W.



Tracer Sectors

You task in this adventure is to track down an intergalactic outlaw called Wily. To do this you must travel the galaxy shooting his ships.

As with most of Activision's products, this one based software is slick and well produced. The game is illustrated by a set of well-coloured graphics and text. The bottom four lines of the screen act as your control pads, and the rest scrolls up before the picture. By using SHIFT+L you can look at the last 25 lines of text. The graphics are beautifully designed and use both colour and shading to good effect. While the pictures are rapidly up-loaded from the disc, they appear to be drawn rather than presented as a block of data — very nice. Unlike some other disc-based games, the time spent accessing the disc is short.

The suggested price is complete accepts a large variety of command keys and multi-line command controls. The function keys and abbreviations can be used to move around. You can also keep track of a passing Counter although it's not on the ground. A superb touch in the package is the provision of a detailed road for the new adventurer. They are probably the best instructions I've come across.

The interesting aspect of this plot is that you can play by travelling to various planets in your choice of vehicle, however, it's up to you. The main problem is to acquire money to buy fuel. You are offered 80 tokens and the game is reasonably simple and rating. The price is a little high, but on the whole it's great fun.

A.W.



Portfolios

The Amstrad version of Portfolios has been revised for more space for the Spectrum, and it's not surprising that this version for the 64 has appeared. The package is discontinued on cassette, but disc users need not worry since full details are given on how to transfer it to disc.

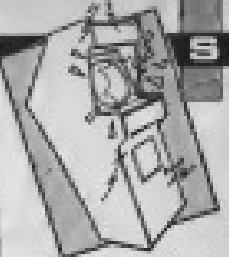
The package is an implementation of Big-Batch with extensions for copy, split and protect. Unlike normal BASIC, RAM is used to store words rather than visual memory on disc or cassette. What this is becomes more apparent with larger memory machines, like systems such as MVS. BASIC provides direct linking to disc or cassette.

The additional words, particularly those for sprite and sound, are extensive. The graphics words are limited to simple high-resolution patterns and user defined characters.

For the screen use, a new feature is the random attribute. Give you just need to remove the instruction to reverse Polish style, the code proves to be more reliable. The package is accompanied by a small instruction booklet which whilst appearing to be comprehensive, tends to be rather superficial and correspondingly obscure. The section relating to the assembly is particularly poor. The basic collection that isn't intended as a guide for new users of BASIC, but those details and examples wouldn't have gone amiss.

Notwithstanding the weak documentation, this is a powerful and efficient implementation of that medium language. A nice touch is that a word — ZAP — is provided to save your games in a safe form if you wish to switch them.

A.W.



Jet Set Willy: The Final Barrier

In the Spectrum the famous Human Willy has won every battle around the mansion, collected decorated party pals so that Marla, his disapproving housekeeper, will allow him into his half-plane for more star-gazing.

On the Amstrad, this looks in 22 blocks and seems to do no age. How about a look at user-defined objects, software houses? And the audience programme and will no doubt find the tape-to-tape. Over the code is in, version, over 100! The Moonlight Games is glorious music, which sounds even better when amplified. And, as in the original two-part tape which accompaniment for the score.

The music is a faithful reproduction of the Spectrum version, at least in style. Small semi-coloured spritewalk, banjo, tape, tape and concert sheet. Playing tape, various instruments, cockle shells, real name of triangles, the chosen colours seem well in comparison, though the house is a mixture of new rooms, just as quirky as the original, and the option to change colour to ones more suited to the general-access monitor, very thoughtful.

There's no doubt that as a disc, challenging, addictive and fun, like the game that this is a contribution to a more sophisticated machine. A few who knowledgeable by the superb game, doesn't the graphics have been better and sharper, for example, has multi-coloured sprites, and more interesting screens. Given however, the numerous answers in "what poster?", why not build a massive stack which gives the option of surface level and jumping to any room?

B.M.

Price £9.95

Publisher: Activision

Address: Unit 18, Victoria Industrial Estate, Victoria Rd, Bedford, MK40 3JF

Price £19.99

Publisher: Activision

Address: 13 Harley Hill, Moseley Rd, London NW1 3AE

Publisher: Midcomer Inc

Address: Coopers Yard, Hatton, Castle Yard, Rickmansworth Herts HP2 8TF

Price £9.95

Publisher: Software Projects

Address: New Strand Complex, Address 34, Woburn, Bedfordshire MK1 3AB

C64



C64



C64



AMSTRAD





Caveman Capers

The main virtue of this game is its simplicity. You move along the scroll-like screen, occasionally shooting and jumping past or over the obstacles.

The caveman is created as some tarzan-like caveman and dashes across the screen to jump over holes, avoid the platforms, snakes, spear-throwers and... his dad's as big as I could get. Your progress is recorded easily by saving on a tape as above and reading it back later.

The graphics are good and you can choose the odd prehistoric touch. If you would like to get lost then you can switch over the animal being moved by the caveman. Who's a caveman — at that speed — or a sheep? Some smart short-sighted who had been doing a difficult project as school suggested it was an evolutionary fault?

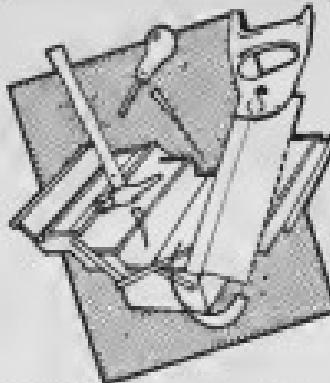
There is a friendly looking instruction which guides the hero into the areas and what you should try to avoid. It does have a friendly note, however, who clears a section of the screen and informs you where you've finished.

It's quite good fun for a while and my kids loved it but may a person live too long. Not much encouragement which fortunately you can switch off. My biggest complaint is against the price, however, which seems high for a particularly meekly game. Formed in spite of the justify pattern. M.P.

Price £7.95

Publisher Acornsoft

Address 40 High St, Goford,
Tyne and Wear



The Illustrator

Gibson's entry, *The Quill*, has been a bestseller. It allows users to create, and even market, their own computer adventures. The only limit is imagination, the program being very easy to use.

Now, Gibson has released *The Illustrator*, a supplement to any program which allows you to produce the one thing *The Quill* lacks — graphics — in your adventure. The two programs work well together. First, the art designer is developed as usual with *The Quill*. Then, The Illustrator is loaded. It loads in the first few bytes of the saved rom, and would not know many about graphic locations need to be set up.

The program is again easily used, simple and very user friendly. It comes complete with a comprehensive manual which gives a step-by-step introduction and detailed description for later reference. The manual lists the six adventure endings with *The Quill* as an example to show the user how to do. Five of the endings are easily drawn, and the manual describes how to make the sixth.

Believing Graphics from the same media will impress you with a black screen and two cursors at the bottom. To draw, you move and cause as many of eight directions, then press L to save, which leaves the two cursors. Both cursors can be brought up as a readily selected area of the screen with the MOVE or PLOT commands.

You have full control over colour settings due to filled

models, and other shapes are plenty, but effectively Acorn can also be shaded in one of 255 patterns.

If you want to use a certain graphic again then copy, for example a tree, then it is fully colour controlled. This allows you to draw a standard picture, then place it in any location, in other colours, as one of 12 scales. Although not as useful as all the patterns look similar, if used properly it can be an extremely helpful feature.

The graphics are stored in long areas, which are saved and interpreted by your Quill adventure. Obviously writing graphics requires the memory available for art, but wisely used, *The Illustrator* should not reduce play too much.

The programs themselves can be extremely addictive, if a little slow to build up. The examples given are very good, but somewhat not very educational. However, some people may notice the fact that they pick up the whole screen, then disappear into a corner of a room, rather than remaining consistently on screen as in *The Hobbit*.

It should be fairly easy to learn to draw using *The Illustrator*.

There is only one real drawback to this otherwise excellent game — the price. At £14.95, it is very costly considering it is an add-on program. For a game user to buy a complete adventure system would cost £30 — although this might be justifiable considering you could well be a chit topper with it!



Mindshadow

Not being content with the arcade market, Acornsoft has now entered the adventure field. This disk-based program offers both graphics and text and follows the classic trend in adventuring. The plot is simple. You find yourself on a deserted island. Where did you have a day of leisure. Your task is to find out who put you there and who dumped you on the parchment.

The format is fairly standard with each location observed in walkabout mode. The bottom line has given the current text, but the screen beaten regular the graphics so you can check the last 20 lines of text.

The games is quite competent, accepting multiple commands. You can use it to refer to the location named and a wide range of commands are available. One additional command is TALK, which may judge more than your memory. If you go mad, you can invoke assistance from a friendly mouse, but if he's helped the much as far. The function keys can be used to cover the command menu.

The high spot of this game is the superb graphics, in fact the best I've seen. These appear to be of Kodak pad quality but draw rather than black-bordered. The creation of these pictures has done without addition and has done a great job. The disc is accessed with one a picture is required but it's pretty fast.

Overall a tough and challenging game which, judiciously, is perhaps a little over priced.

A.W.

Price £14.95

Publisher Acornsoft

Address 12 Harley Ave,
Mortehoe Rd, Regent Park,
London NW1 1AE



654



AMSTRAD

Price £14.95

Publisher Gibsoft

Address 30 Newthorpe Road,
Bury, South Glam

BACK TO BASICS

Take the plunge!
Colin Wilton-Davies
shows you how to
draw pictures using
your Spectrum in
the fifth of our
regular series

Those of you who possess the valuable collection's items as well as the proceeds from parts of the series, will be greatly assisting our plague rats. *Sincere* people like us. The author would have had a field day still, if not told by our editor to look at how to use the DNA and PAGE techniques to control the colonies used in PEST assessments.

These are used in a very similar way when drawing portraits off the Specimen's display. See **SHR** and **TAPER**, before a **CLS** specimen, and the whole of the leaves will change to brownish, and the change, will be local. Don't forget that, if you want to leave your work on canvas, it makes life easier if you have these areas at the end of your process.

With the Spectrum box set from the left hand edge of the screen, the "yes" should be -- this is the "X" no gradient. Then scroll up "Y" no gradient. This defines the distance from the bottom of the scope to where you want to plot Spectrum and then the middle word "PLOT XY" without any quotes, a dot will appear in the status bar on the left.

This shouldn't surprise you. The slopes between the X and Y can be found the old way by looking them up in the manual or with a calculator.



the same time, the two men left the
area. At 10:45 p.m.,
the police came to the house and found Mr. and Mrs. L. L.
and their son home.
At 11:30 p.m.,
the police came to the house again.
At 12:15 a.m.,
the police found a man in a room.
The man was a Negro.
He was found dead in a room.
The police took him to the hospital.
At 12:45 a.m.,
the police found a man in a room.
The man was a Negro.
He was found dead in a room.
The police took him to the hospital.

R.J. Hamer: The Supreme Court's and the R.I.P.A. That's

New PLOT isn't the best way of drawing lines, particularly if you need them drawn fairly quickly. The statement to use is DRAW. I suggest using PLOT whenever it only needs one coordinate pair. To draw a line, the operator needs to know where to start and where to finish. Get rid of the last program by crossing all the last numbers except 1000 and 2000, and here is the following:

the author and the editor
are identical.
the editor is
the poet.
the poet is
the author.
the author is
the poet.
the editor is
the author.
the editor is
the poet.
the editor is
the author.

Think about that last statement, if DIAW was his plan, the world would go on the highest right corner of the screen. DIAW the program, and you I see that DIAW is last name relative or otherwise, not his absolute name used by PLOT. So the first number with Specimen has to be three right, the second four for to draw up. That's right. Because, you can see apparently

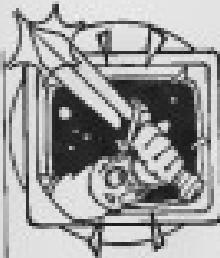
I feel it worthwhile to say a few words by themselves and LOAD them before starting a new program rather than type them in at the prompt itself. Every beginning of program written can then be tested by entering TOS 00000 and entering either `LOAD "yourfile"` or `LOAD "yourfile",1` prompted. I know I'm repeating myself, but you'll thank me one day.

It would be good if our
graduates associate with the
BIRDS' Committee. You will
nearly have to make your list
and then you should provide
what you consider good evidence
of your choice. Enclosed are
the Committee co-ordinators
which was arranged when I
asked to draw something
up. If you have any trouble
to get your specimens at the
berth, and so does the
specimen. Or rather, we have
got the Specimen.

This is done by specifying two numbers. The first number

for you. Now RUN the program, and you'll see a little window at the bottom left of the screen and sweeping to the right. As long as it reaches the right-hand edge of a stage, and you press the "right" message.

• longer than 10 min. •



Peter Swoosley makes a Wally of himself in Mikro-Gen's sequel to Pyjamarama, and he scores himself silly with Transylvanian terrors

VENTURES

If you take you to a world where it's dangerous and mysterious, with vampires, HCW's regular column dealing with adventures and experiences provide adventures for new readers. This week I shall be making a right Wally of yourself in Mikro-Gen's follow-up to Pyjamarama, almost given equal a carbon arrest with two Transylvanian terrors, and something more... or at least for a new audience. Plus one reader's thoughts, and the last part of the map for Transylvania Too!

Pyjamarama

"A shanty or a bungalow or a tent, a mess or a muddle or a shack, everywhere," a Wally says. Are You Being Served? remembers Miss Marry as sole star of the game of the same name. That's pretty much it, though the field of play is, after all, almost as bad as some of Mikro-Gen's earlier computer games. But I suppose it's a matter of personal taste. Now to the game.

Wally Week was the star of previously the best adventure ever released, Pyjamarama. Everyone's A Wally also features him, along with friends Tim, Paul and Harry, plus wily Wilson and silly old Hartshorn. With the exception of the latter, all of these can be controlled by the player, as Lord of Miskatonic, however.

The game is set in an average house, complete with bath-tubs, bathers, tables and pots of soup. Each of the gang has a specific task to do (for example, Tim, a plumber, will need sanding the floor boards). You also have to discover the combination to the bank safe, so that the gang can be paid, and survive by taking and dodging

Everyone's a Wally™
by Mikro-Gen
A computer game for the Amiga, Spectrum, C64 and Amstrad CPC.
Everyone's a Wally is a computer game for the Amiga, Spectrum, C64 and Amstrad CPC. It's a game in which you control a group of people who are all Wallys. The game is set in a house where you have to do various tasks, such as fixing pipes, cleaning the house, and finding treasure. The game is designed to be fun and challenging, and it's perfect for anyone who enjoys a good laugh.

Objects must always be used the right way, and there are plenty of them, ranging from the obvious (so many books) to the ridiculous (jellybeans). And here you can only control one character at once; the others wouldn't appear and will often take the object you need most. The game has three different "levels" to increase your progress: morning, midday, lunch break and afternoon tea-break. And you add up to an unusually complex game.

The best features from Pyjamarama are still here. We have seven personalities, sound effects and two arcade games (jellybeans and the telephone booth), plus added in (the research). Graphics are reasonable, some of the best ever seen in home games, even the Spectrum. The characters are well and individually animated, there is a good level of interaction and control is simple.

Colours are masterfully used, although Spectrum owners don't get on with some surfaces (shades). The game has a cartoon-like quality. The backgrounds are varied and provide scope. The sound effects are quite dependent on the machine, rather than pumping, but as with the previous game, sound and adventure has been mixed perfectly.

There are a few minor flaws. Wilson is the only bather and represents smart stereotypicalness when, the does the shopping. Less informed gastronom-

right had it very difficult, although keep reading because for later!

Programming has never been a strong point with Mikro-Gen — let's hope the box is fibrous and how a game of this standard can last with patient users unknown I do not know. The price isn't unbearably bad — I would have preferred a normal box box and as record at a sensible price. Finally, a 32KB cartridge should have been included, if only at the £10 bonus.

In general, however, this is an improvement on Pyjamarama, and the best adventure you can buy. As a sequel it's better than Abra's Ice Castle (Lure 15) or (that is), if you own a 486 Spectrum, C64 or Amstrad CPC, it's a must. It costs £9.95. Vampires ruling, sirre.

Now it's time to sit back down your sofa. Games with speedy action have been managed to turn people around and the money market turned. Adventure international readers: The Coast, Voodoo Castle and Glastonbury Town. So recently released games have arrived. Glastonbury Town from the well-respected Redhouse, Phoenix and Castle. Despite from the director, Deckard, these do they manage to stand out from original titles?

The Phoenix is more or less the same as both. You play in a village of medieval villagers, over a mostly gloomy forest, and must solve a mystery tower,

GBa

to tell the Comm. Of course, being a George house, various May members will try to tell you something, (including, we're told, the like)

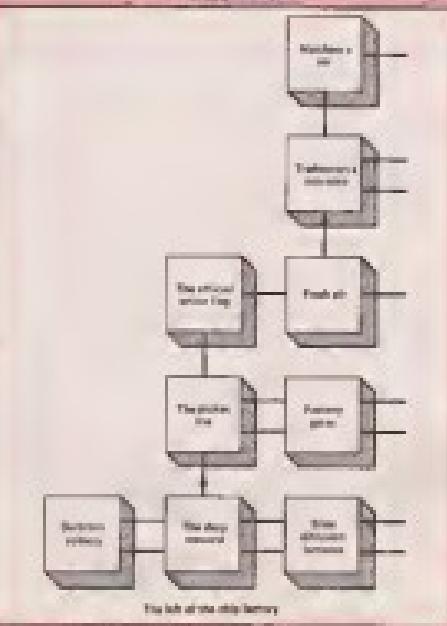
So which game should the child play with a bird for blood test? The *Mathematical* Player game is, as to be expected, very popular. Such, arithmetic graphics appear at every instant, updating full sets of counts and high resolution in the background atmosphere create added stress, which is fine at first, but needs to be turned off eventually.

The village is thoroughly penetrated, there is a good level of classroom instruction, allowing you to teach in the villages, and full square possession is allowed. Vocabulary is good, and a full list of tools is available by type VOCAB. Unfortunately, some of the other commands used in the instructions don't work. Neither the security set problems are original, but the game is well implemented.

The Dogwood program is well paid. This is not necessarily a bad thing — but here we are at that and inferior. Unlike the Melbourne House plan, our expenses are mostly short and administrative. There are no full staircase loops, or elaborate passageways, but there is a main Vocabulary as poor, frequently the interrogative does not receive accent used at the yes/no Response stage. Furthermore, my law, and there is a sense of having turned some where in the game. The problems are mostly subtle, although I was entertained trying to drop a set of arrows with a one command. In general, however, this is like most Dogwood releases, incredibly average.

To sum up, neither of these programs at this time. Of the two, Code 11 seems to much better — it is slightly more for worse though, and as D-73 interpreted, there is a "negative" rating of +10. The Backward grade is D-73, change, but also totally wrong, as a Venture rating of

I've about finished but
would wait till you get home.
Then I'll search out the
unpublished names of some more
I've had as a repeat publication
here. Have to find a new
publisher, this advances
through the ages, no doubt
starting in primitive times,
when men learned the art



The time there has been better applied to Level 3's Books Of Life and even *Karma*. This is basically the same program as Castle Drama, with different words, so the same comments apply. Same song too. Please no more Duckworth games!

Gallaga's home in HCW 102, about the Scott Adams game. Return To Phoenix file. He says, again correctly, that the Super Dodge game means that that's where adventure ends. (Phoenix file) starts. You don't need to have Phoenix file to play the game.

He also says: "One idea for people playing the adventure [is] the first time she's with the Delta and you don't see like some old hill country, and doesn't make the place until you have the cameras. If you have something, then hold something, although it won't appear in the pictures."

Can anyone help Mark find the above chart, get the file back to the invited experts for info in the discussion? I hope to review the piece soon.

Thanks for your letter, Mark, who also expresses my thanks for being a fan driver. That shall be recorded in books.

Individuals who will need help with opening a web site have
to pay for services. Read the web
carefully, then remove what you
need to. Once you have made
the web, jump from MySpace

Tschersich Ted is rapidly closing well on the share. Per
gola is also there's the head part
of our map. If you put those
together, the four parts show all
the regions you can reach at the
beginning of the game. From the
sixty-ninth, Captain led them there,
west and east. The fourth
risk for anyone smuggling a or
the Japanese cupboard.

Finally, I arrived in Germany's A. Wally. By the time you read this, most people should have reached morning peakbreak. Fortunately I reached this point within a couple of days, with a little help from my supervisor, Conrad Werner. The first job as a plumber took You need a plumber straight into and, removing the one major obstacle you must face you can hit the bracket. Use your extreme wire to make cables, then lay a lot of concrete. Now as obvious, atmosphere, to stop lightning strikes. Most there away now, you have a solid foundation.

Each new time with him,
he still more reveres
him, respecting

Send your problems, ideas and
news on advances and im-
provements you've made to **Progress**,
Home Cleaning Products, Inc.,
1000 Lakeside Avenue, Louisville, KY 40206.
1-800-255-2555.

Brian Jones
continues his
easy-to-follow
guide to
Commodore BASIC

WELCOME TO BASIC

How did you get on with the problems I set in my last article? Here are possible solutions.

WHAT is and what happens? That's how the computer tells you it's waiting for something. In this case it wants a value. So

```
10 LET L=5
20 LET P=10
30 PRINT L*P,L+L,10,P+P
```

4.

```
10 LET P=10
20 LET Q=10
30 LET R=P+Q
40 INPUT U$ "ENTER PRICE EXCLUDING VAT" : P=U
```

I recommend that you use variable names which refer to these things, such as **L** for price and **P** for total price, for your own reference. The computer checks that names start with a letter, then no characters other than letters or numbers are used and that the name doesn't clash with one of its own reserved words. The **LET** or **PRINT**. You can't use a variable called **LETTER** or **OUTLINE**, for example. Again bear this in mind when you're writing programs, so it would make **TOTAL** and **TOTAL** the same name. For the same reason, try not to mix up the syntax, keep the names very short.

Now let's look again at the punctuation in the **PRINT** statements. The punctuation allows enough blank space to run one after the other. When the numbers followed the punctuation, the computer put two spaces before it started the digits. One space is punctuation and the other is reserved for a comma sign, if needed. It also puts one space after the last digit.

Now it's time to come clean. There's something about all the programs so far which is contrary to what computer programs try to do about! As the programs stand, they only work for one situation. To change the values they work on, you'd have to change the program. OK, that's not difficult, you can just enter a new line with a new value. But fundamentally there's not one program for everyone. In the first of this series I showed you how a BASIC program can read and write data or information. To achieve this we try an instruction called **INPUT**. This program I have will replace line 10 with a new version:

```
10 INPUT L
```

line 1, 5, all or 999 — whatever you like. When you press the Return key the answer appears underneath.

INPUT has the same effect as **LET** — it adds a variable name or a value to the computer's memory with the name **L** and the value 5, or whatever you choose. Line 10, when on lines 10 and 20 the name **L** is used, the computer can take up the value which **L** has, and use it.

INPUT has a similarity to **PRINT** in that it can display messages. We can use this to inform whatever is running the program what it wants. For example:

```
10 INPUT "HOW MANY LINES TO CONVERT TO POINTS":L
```

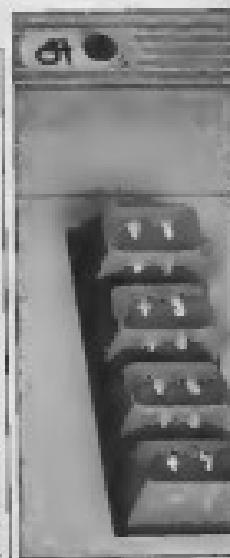
Notice the punctuation. Quotes enclose the message, then a colon before the variable name. Don't put a space before the colon, a space before a space will do! By the way, the punctuation won't do on to the line. Don't worry, the computer will accept up to 10 characters — this comes later — in our program. Here's another example:

```
10 INPUT NAME:NAME=1000
20 PRINT NAME;" IS YOUR AGE"
```

And although I haven't done it in the text, as well as **PRINT**, as a variable, you can **PRINT** the answer to a calculation. Here's another:

```
10 INPUT "ENTER THE VALUE OF X":X
11 PRINT X*X;" IS THE AREA OF A SQUARE"
```

Just as you can **PRINT** more than one thing per **PRINT**, you can **INPUT** more than one thing. You will find that you can enter just in the two values,



each followed by Return, all together, separated by a colon.

Don't worry if your value goes from one line to the next. The computer only takes a command of **INPUT** at the end of a line. But do beware when you try your own messages. If the message is longer than one line all except the latest occurs. Commodore 64s and all VIC 20s have a bug which makes the computer print the message as part of your value. And if you type a lot of words after it's expecting numbers it displays "REDO FROM START". So don't expect it to accept it **STOKE**, I **CIDS**.

Now I promised last issue that

I'd tell you the purpose of those strange characters like carriage returns you've typed in. They enable you to move the cursor in either the screen direction

```
10 INPUT "ENTER THE VALUE OF X":X
11 PRINT X*X;" IS THE AREA OF A SQUARE"
```

a **INPUT**. Clear the program completely to memory by entering **NEW**, then enter the line

```
10 INPUT "C"
```


HARDWARE

Eric Doyle peers into the workings of the new Sailor RC-1000 wrist terminal

It seems that the current buzzword in computer circles is "portability". As the size of machines reduces, the capabilities of the once lumbering super-watch successor New York's just produced a combined watch and database for the jet-set executive.

Measuring only 41.5 x 19.6 mm and weighing only 30 grams, the fully packed model has 8K ROM and 32 Kbytes with an LCD display of two rows, each having 12 characters. Each character consists of a 5x7 dot matrix, and gives a pleasant, readable display.

The screen, or display, normally shows a 12-line time display with the day and date but a third option may be set at the push of a few of the six buttons which are positioned below the LCD window.

So far nothing new or startling. However the model can be programmed with data, which takes its capabilities way beyond the usual chronograph.

The RC-1000 is supplied with disc or cassette-based software and a hand-wrist terminal to be linked and programmed by a master computer. The new model was converted directly to the very port of my Commodore 64 but versions for other popular computers are available, though these require RS232C interfacing. The software permits the owner to enter four types of data: weekly alarm, schedule alarm, world time and memo. The functions are stored over 80 16-character entries and put these into 80 lines as divided among the four data categories as decided by the user.

Each of the alarms can have an upper limit with a 12-character extension of its duration, 1983 to 2060, OFFICE or FRIEND BIRTHDAY. This lower line is reserved for the alarm data which for weekly alarms consists of day and time, the alarm going off each week according to this data. The schedule alarm is a one-day alarm, being set for a fixed time and date ranging from today until the year 2050.

World time can be selected so that the current time in any selected city can be displayed according to its time zone. The software is written in assembly, and BASIC to allow the input of new data for any city, which may be of interest to the user but not included in the standard listing of 128 cities.

By far the most flexible function of the watch is the memo facility. Memo may be subdivided under any self-selected category such as PHONE NUMBER, CHECK LIST and, depending on available memory space, any number of items may be listed under the relevant heading.

Now for the catch. The price of this package is thought to be around £1100 and, despite the class of user-friendly software, I found the program laborious and time consuming to learn. I thought it through documentation. The watch is delivered in its full protective

case which would probably deterle a would-be programmer. Is a memory or personal assistant, free of charge, I suppose, would still be a pleasure or simple task to perform.

Clever, improved software, that is a watch with a duration of 10 years, my wife parcels a watch (well, Sam Johnson (1959-1984) this weekend like a dog walking on his hind legs. It is not done well, but you are surprised to find it done at all.

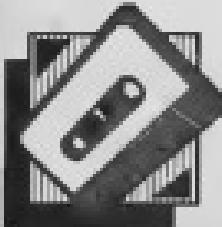


Price around £1100

Marketed by Maxon

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VENTURE INTO THE UNKNOWN



**Use your
initiative to find
your way through
this adventure
by Simon Eye**

The adventure for the
Commodore 64 has 15
levels. The vocabulary is

located, but your real aim is to guess when each object does and in which order to pass through the rooms.

The various and unique as described in the text, so study these finger types and in no time you'll be able to wade off into the depths of knowledge.

Vocabulary introduced
QUIT, PW (payments), HELP
(which provides three choices).

JUMP, BILL, SWIM, WAIT
CUT above, DROWN above
OPEN DOOR, UNLOCK
DOOR, RUN to random
location, WAIT.

Phase II results

- 2-PT simulations
- all 4000 measurements
- 100-2000 ground locations, phase II
- 200-300 get compensated and verify
- 300-400 verify compensated
- 4000-5000 various frequencies
- 20000-30000 data for locations

```
50 DIMPLE(15),PA(15),PC(15),P(15),D(15)
51 DIMPOLE(15),DOL(15),DOLB(15)
52 FOR I=1 TO 15:READLX(I,PA,I,DOL,I,DOLB,I):NEXT I
53 NEXT I
54 FOR I=1 TO 15:READPC(I,PC,I,DOL,I,DOLB,I):NEXT I
55 FOR I=1 TO 15:READP(I,P(I),DOL,I,DOLB,I,DOLB,I):NEXT I
56 PRINT "YOU ARE IN THE WORLD OF ERGONOID."
57 PRINT "YOU ARE IN THE HELL OF ERGONOID." DOLB(1)=1
58 PRINT "THE MISSION YOU WERE TOLD TO DO, IT HERDS."
59 PRINT "TO ESCAPE FROM ERGONOID YOU MUST FIND"
60 PRINT "THE HOLY MAGNETIC TAPE AND SLOT IT INTO"
61 PRINT "THE MAINFRAME."
62 PRINT "YOU LOOK AROUND THE ROOM IS STRANGE AND"
63 PRINT "MILLIONS OF PEOPLE SPIN FREEELY, YOU DECIDE"
64 PRINT "TO FIGHT, YOU CROSS YOUR FINGERS AND HOPE"
65 PRINT "FOR LUCK. PRESS ANY KEY TO BEGIN."
66 FOR I=1 TO 15:DOL(I)=1:DOLB(I)=1
```





2800 PRINT "BIG PINK SPIDER BITES YOUR HEAD."
2805 PRINT "BUT LUCKILY YOU SURVIVED. THE SPIDER"
2810 FOR I = 1 TO 1000 NEXT I RETURN
2820 PRINT "BIG HOUSE COMES OUT OF ITS HOLE!"
2825 FOR I = 1 TO 1000 I PRINT I + "CHEESE" THEN I RETURN
2830 IPRINT "THE BITES OFF YOUR HEAD." !GOTO2000
2835 PRINT "THE HOUSE EATS THE CHEESE AND DIES!"
2840 PRINT "THE CHEESE WAS POISONED. GOOD JOB YOU!"
2845 PRINT "NEXT DAY IT EAT I EXP" !GOTO134 + "I EXP"
2850 FOR I = 1 TO 1000 NEXT I RETURN
2860 PRINT "THE EDITOR PET DRAGON RUNS AT YOU!"
2865 FOR I = 1 TO 1 I PRINT I + "SWOOSH" THEN I GOTO2050
2870 NEXT
2880 PRINT "IT EATS YOU IN TURN. RACE TO CRASH SITE."
2885 PRINT "HOLLA. THE EDITOR IS SWIMMING IN THE BATH!" !GOTO2050
2890 PRINT "YOU LAUNCH YOUR SHROD INTO THE DRAGON."
2895 PRINT "ITS DEAD. THE ED WILL HAVE TO GET ANOTHER."
2900 FOR I = 1 TO 1000 NEXT I RETURN
2905 PRINT "LACERS DAY TAILED YOU!"
2910 PRINT "OUT OF WATER BURST!"
2915 FOR I = 1 TO 1000 I PRINT I + "MIRROR" THEN I GOTO2050
2920 NEXT
2930 PRINT "THE RAYS SUDDENLY HIT YOU. YOU PRIZZLE!"
2935 GOTO2000
2940 PRINT "THE RAYS REFLECT UNTIL THEY DIE OUT."
2945 FOR I = 1 TO 1000 NEXT I RETURN
2950 EXP4=EXP4+1 !GOTO204000
2955 PRINT "I DONT SEE THAT HERE!"
2960 FOR I = 1 TO 1000 NEXT I RETURN
2965 EXP4=EXP4-1 !GOTO204000
2970 FOR I = 1 TO 1000 I PRINT I + "NOTHING" !GOTO4 = "BLOOD" !GOTO204000
2975 FOR I = 1 TO 1000 I PRINT I + "THINGS" !GOTO4 = "GROWTH" !GOTO4000
2980 NEXT I PRINT "NOTHING ON EARTH!" !GOTO4 + "TO DEBRIS" !NEXT I RETURN
2985 EXP4=EXP4-1 !GOTO204000
2990 PRINT "BOTH NOT CARRYING IT" !FOR I = 1 TO 1000 NEXT I GOTO204000
2995 EXP4=EXP4-1 !GOTO204000
3000 PRINT "BLAH" !THEPRINT "ITS STUCK. I CANT DROP IT" !GOTO204000
3005 PRINT "OH GOBLIN STEALS THE " + EXP4 + " AND TAKES"
3010 PRINT "IT TO HIS DEN. IT'S LOST FOREVER!"
3015 EXP4=EXP4-1 !GOTO204000
3020 PRINT "YOU ARE CARRYING IT!"
3025 FOR I = 1 TO 1000 I PRINT I + "LICK" !NEXT I RETURN
3030 FOR I = 1 TO 1000 I PRINT I + "LICK" !NEXT I RETURN
3035 EXP4=EXP4-1 !GOTO204000
3040 IPRINT "WHICE LINE CHEESE."
3045 IPRINT "EXPERIMENT WITH OBJECTS"
3050 IPRINT "REFLECT THE RAYS?"
3055 IPRINT "NEXT DAY EAT BRAINS OR THE YOG"
3060 FOR I = 1 TO 1000 NEXT I RETURN
3065 X=INT(1000) + 100 + 1 RETURN
3070 IPRINT "WATER" !GOTO2000
3075 IPRINT "NO WATER!" !FOR I = 1 TO 1000 NEXT I GOTO2000
3080 X=INT(1000) + 100 + 1
3085 IPRINT "WATER" !GOTO2000
3090 IPRINT "FISH BITES YOUR BUM!"
3095 FOR I = 1 TO 1000 NEXT I RETURN
3100 PRINT "I SEE NOTHING TO KILL!"
3105 X=INT(1000) + 100 + 1
3110 IPRINT "TRY TO KILL THE FLY ON THE WALL!"
3115 IPRINT "TRY TO KILL YOURSELF!"
3120 FOR I = 1 TO 1000 NEXT I RETURN





GRAPHICS ON THE AMSTRAD CPC464



Phil Taylor
introduces his
program for
multicoloured
graphics on the
CPC464

Many owners of the first Amstrad machines will no doubt be very impressed with the wide range of predefined graphic symbols already programmed into the computer's memory. These are far more extensive than the Teletype types can be found in other colours. However, there will obviously be times when a shape is required for which there is no CHRS\$, and the symbols mentioned above do not fit. The user then gets whatever graphics characters he will need, so the SYSTEM AFTER \$20 will test CHRS\$ (\$100 in CHRS\$100) to be determined. In fact, all the positions from 8 to 255 can be used, allowing for virtually any pixel size, or whatever.

The method of defining such a character should be well-known to all, and is detailed on page 66 of Chapter 8 in the Amstrad manual. Although hex numbers are used in the examples, I will prefer to work in binary, and this is allowed for. Each position in this word 1,2,4,8,16,32, and the total can be written as binary numbers.

The problem arises, however, in that, if a shape which will fill more than one screen, and this is dealt with in the article. The main purpose, however, is to show how colour might be 'switched' on in this multi-coloured graphics, might be built up. I previously covered a Spectrum, where this was impossible, and, this is Electron, on which the VDU's composite power, the text and graphics formats, allowed these figures to be built up.

The problem is best approached by thinking of the characters being drawn in one colour, on a series of pages of another colour. If several such sheets are put one upon the other, only one final picture will show, because of the usual effects of paper. We can use the analogy which is standard in a way of drawing the last picture on sheets of clear plastic, rather

than on paper. Exactly this technique can be achieved in the Amstrad by using the CHRM\$100 command. When followed by CHRD\$10, as in fact, this turns on a transparent mode, which can be controlled by PRINTING CHRM\$100+CHRD\$10.

In order to make the testing easier to type-in, and to enable me to re-type during the typing-in process, I have made

extensive use of the other, less well-known CHRS commands. These are explained during the course of the program. I have decided these fairly straightforward entries to render the code as understandable as possible for clarity. I claim no prizes for clear brilliance, but I feel they do show the possibilities. Below, I give a 3x3 grid, with the CHRD being defined as follows:

201 black	205 black	209 black
202 pink	206 pink	210 pink
203 orange	207 orange	211 orange
204 blue	208 blue	212 blue
213 black	216 pink	219 black
214 pink	217 blue	220 pink
215 blue	218 orange	221 blue
222 black	224 black	228 black
223 pink	225 pink	229 pink
226 red	227 white	

Fig. 1.

Thus a total of 29 SYMBOL commands must be written out. These can then be put together in a fairly straightforward manner:

SYMBOL works.
16-79 CHRM\$100+CHRD\$10 to start the program.
80-100 CHRD\$10 is a physics experiment. To define the characters below we can just place them in the spaces.
101-110 CHRD\$10, following on to 101 values.
111-120 CHRD\$10, the second in a four-position column.
121-130 CHRD\$10, a loop to print the characters across the screen.
131-140 CHRD\$10, starting with some text. Note that the long string is not completely sorted through the form.
141-255 contains the usual graphics characters. These consist of two CHRS commands, implemented here

CHRM\$100+CHRD\$10+
CHRD\$10 is equivalent to LOCATE 4,4.

CHRD\$10 is equivalent to PRNT 8.

CHRM\$100+CHRD\$10+CHRS
will draw many overlapping shapes, each starting exactly one after the other with no gaps.

Lastly, you will notice that my experiments, the same program over and over again. There is no reason why this should not be done, but the single point is to give repeatable results for each, so that if new characters are available and needed.

I hope you can now appreciate with some degree of confidence with multicoloured graphics. There is no limit to what is possible; a little imagination and you

- 19 PRINT "PROGRAMMING FOR THE AMSTRAD CPC464"
- 20 PRINT "BY PHIL TAYLOR"
- 21 PRINT "VERSION 1.0"
- 22 PRINT "1985"
- 23 PRINT "AMSTRAD COMPUTER MAGAZINE"
- 24 PRINT "100 INSTRUCTIONS BY PHIL TAYLOR"
- 25 PRINT "100 INSTRUCTIONS FOR MULTICOLOURED GRAPHICS"
- 26 PRINT "100 INSTRUCTIONS FOR AMSTRAD CPC464"
- 27 PRINT "100 INSTRUCTIONS FOR AMSTRAD CPC464"



ANSWER

A black and white photograph of the Amstrad CPC 6128 computer system. The main unit is a dark, rectangular case with a small screen and several control buttons. A large, light-colored monitor sits on top of the unit, displaying the word "AMSTRAD" in large, bold letters. The monitor also features a smaller line of text below it.





SHEKHANA COMPUTER SERVICES

Glendale - The city of Glendale has a population of 100,000 and is located in the San Fernando Valley, approximately 15 miles from downtown Los Angeles. It is a diverse community with a mix of residential, commercial, and industrial areas. The city is known for its beautiful parks, including Griffith Park, which features the famous observatory and the Hollywood Sign. Glendale is also home to several museums, including the California Science Center and the Autry National Center of the American West.

在於此，故其後人之學，亦復不能無遺失也。

卷之三

Here's the third part of Clive Gifford's series on Amstrad CPC464 noise capabilities:

SOUND MOVES

Now that the envelope commands have been served, there is one final area I would like to mention and that is poor Australia's ability to generate new songs.

While some in the book of all the engineers, gamblers and drumbeats, join him on paper. Aboard. While others abhor a whole new range of words never created, words which don't have a meaning save for their PAGE.

How do you obtain the upper channel? Firstly, you must search all the pitch parameters of the sound statement, then by adding a number between 1 and 13 as the second number on your SOUND message, you choose one of the different types of what voice sounds.

Putting a number of the different notes in a loop to be played one after another creates an interesting effect. If you play them in reverse order (from 12 to 1) with a division of a half or a third of a second, you get quite a good imitation of the notes ringing on the sheet.

The upper channel can be used on its own, as suggested above, but it can be used often in more effective ways used in conjunction with one of the lower envelopes. Below are two different effects found when this route is shaped by an envelope.

10 May 1998

See also 1, 16-18

The mono-cypherspace decoder is a member of the Feistel family of ciphers discussed over the previous sections. The key size of 16 bytes, including the ESC key, at play differentiates the KRY DES substantially from DES 56 bytes. The key consists of two 8-byte keys, the right key of the top-round DES, CLB, and so can be used for encrypting the ESC key bytes. The decipher round takes two keys to obtain control values.

The 16 keys play the bass notes of the middle and the upper first octave. The note on line 16 corresponds to the central musical group, whereas the numbered notes at the very beginning of the row correspond to the choice of notes. Some (DUFER 1962)

synthesised drama. Organ (the basic, unbroken sound of the instrument's sound-pattern) and Spectre (the "X", "W", "Y" and "Z" as added over sound and thus also over

As a second key is pressed, a new end-of-column sentence is generated. From looking at lines 100 to 130 and lines 200 to 300, you can see the whole repertoire of sentence which effect it automatically; these sentences can be taken from the program and used to play new programs.

steps have the just under one-third of a second. I like trees to keep the distance for clarity so maximum range cannot limit the woods and the speed they are played, but I soon found that the quality of the message deteriorated when adapted to smaller distances. The end result is a compromise which produces some reasonable effects.

The rest of the program is concerned with collecting your input and with providing the correct answers.

DUNGEONS OF STORMWRATH

Trapped in the dungeons of Castle Stormwrath you must escape and steal the baron's magic powers.

By Clive Gifford

A slender dagger and a leather cap are all I have, the formidable form of Castle Stormwrath already commands the horizon. The layout of the dungeon is not a friendly place, as you have found out, spending the winter in a dangerous, damp region the castle's keep.

You are a simple peasant with a single mission to prove yourself to your benefactor from the baron. To do this you must leave the place of the baron's magical realm. Steal the sword and escape from the castle's walls.

This adventure uses the same standard techniques because there was only the first three levels of such a command and player interface. It should take you many hours to complete.

Commands Available

GOT	WEST	EMPTY
TAKE	SOUTH	LIST
PICKUP	EAST	
		INTERVIEW
BADF	WEST	LIGHT
LEAVE	UP	OPEN
NOTES	DOWN	SCROLL
THROW	KILL	WEF
POLISH	BUB	CLEAN
QUIT	DAWN	EXAMINE
CAT		

Objects Available

LAMP	FULL_BOTTLE	
KEY	BOOK	CHESS
KEY	WAX	CLOISON
EMPTY_BOTTLE	APPLE	SNARE
TRAILL	GENIE	BALCON
MOLLOW_PLANTS		COUPON

```

18 GET      *****
20 GET      CASTLE STORMWRATH
22 GET      *****
24 GET      *****
26 HOME 1,LOCATE 5,1,2,PRINT "PLEASE WAIT"
27 LOCATE 1,1,48
46 PIP=1,CLS,PDH 1,1,BORDER INTRO=0,7,1,48
48 IF HOME THEN LNK 1,24,1,LOCATE 6,1,48
49 PRINT "YOUR STRENGTH HAS FAILED YOU",LNK
50 LNK
51 PRINT,PRINT STRONG(48,"")
52 PRINT "You are outside of L-1 THEN PR
53 INTRO=0,7,1,48
54 PRINT,PRINT "You can see...""
56 FOR TAU TO 17,IF GOT,11-F THEN PRINT
57 TAB(1),INTRO
58 NEXT
59 PRINT,PRINT "Visible items are
60 1,1-FOR TAU TO ALP,LIP,TIM,THEIR FRONT
61 REVERSE,INTRO=2,241,""
62 NEAT
63 PRINT,PRINT "The walls of the castle are
64 2,0,11-F OR D19,11-F AND F-22 AN
65 3,0,15,11-F22 THEN PRINT "You hear cheer
66 ing resonance",LNK
66 4,0,11-F OR D19,11-F22
68 5,0,11-F AND D19,11-F AND D20,11-F22 THEN
69 GOT-1
70 6,0,11-F AND D19,11-F AND D20,11-F22 THEN PRINT
71 "The walls walls from your grasp an
72 a hole in the floor...",SPASH,ROUND 1,32,1,48
73 7,0,11-F22
74 8,0,11-F OR D19,11-F OR D20,11-F22
75 OR THEM PRINT "You cannot move, the castle
76 turns to about to attack!",LNK YEL TO 78
77 IP,YOL,IP,YOL,IP,TIM,THEIR FRONT
78 9,0,11-F AND D17,11-F AND D21,11-F AND D17,21-2
79 THEN PRINT "The Guards see you and attack,
80 all extreme caution, you must fight"
81 FOR TAU TO 78,IP,TIM,IP,TIM,IP,TIM,THEIR
82 FRONT
83 10,0,11-F OR F-24 THEM SPASH
84 PRINT,PRINT THE INPUT TAU,NEUT,""
85 11,0,11-F OR LEFT,148,21-11-F AND
86 2,0,11-F22 THEN PHILIP,21 ELSE 0,LEFT,148,21-11-F AND
87 3,0,11-F22 AND 4,0,11-F22 THEN PHILIP,21 ELSE
88 5,0,11-F22 AND 6,0,11-F22 THEN PHILIP,21 ELSE
89 7,0,11-F22 AND 8,0,11-F22 THEN PHILIP,21 ELSE
90 9,0,11-F22
91 10,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
92 EN 228
93 11,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
94 EN 229
95 12,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
96 EN 230
97 13,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
98 EN 231
99 14,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
100 EN 232
101 15,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
102 EN 233
103 16,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
104 EN 234
105 17,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
106 EN 235
107 18,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
108 EN 236
109 19,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
110 EN 237
111 20,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
112 EN 238
113 21,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
114 EN 239
115 22,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
116 EN 240
117 23,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
118 EN 241
119 24,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
120 EN 242
121 25,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
122 EN 243
123 26,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
124 EN 244
125 27,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
126 EN 245
127 28,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
128 EN 246
129 29,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
130 EN 247
131 30,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
132 EN 248
133 31,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
134 EN 249
135 32,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
136 EN 250
137 33,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
138 EN 251
139 34,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
140 EN 252
141 35,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
142 EN 253
143 36,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
144 EN 254
145 37,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
146 EN 255
147 38,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
148 EN 256
149 39,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
150 EN 257
151 40,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
152 EN 258
153 41,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
154 EN 259
155 42,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
156 EN 260
157 43,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
158 EN 261
159 44,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
160 EN 262
161 45,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
162 EN 263
163 46,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
164 EN 264
165 47,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
166 EN 267
167 48,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
168 EN 268
169 49,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
170 EN 269
171 50,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
172 EN 270
173 51,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
174 EN 271
175 52,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
176 EN 272
177 53,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
178 EN 273
179 54,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
180 EN 274
181 55,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
182 EN 275
183 56,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
184 EN 276
185 57,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
186 EN 277
187 58,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
188 EN 278
189 59,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
190 EN 279
191 60,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
192 EN 280
193 61,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
194 EN 281
195 62,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
196 EN 282
197 63,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
198 EN 283
199 64,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
200 EN 284
201 65,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
202 EN 285
203 66,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
204 EN 286
205 67,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
206 EN 287
207 68,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
208 EN 288
209 69,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
210 EN 289
211 70,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
212 EN 290
213 71,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
214 EN 291
215 72,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
216 EN 292
217 73,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
218 EN 293
219 74,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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233 81,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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235 82,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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237 83,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
238 EN 303
239 84,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
240 EN 304
241 85,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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243 86,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
244 EN 306
245 87,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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247 88,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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249 89,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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253 91,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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259 94,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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263 96,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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269 99,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
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527 228,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
528 EN 529
529 229,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
530 EN 531
531 230,0,11-F OR LEFT,148,21-11-F AND LIP,21-21-2 TH
532 EN 53
```

228 IF L=2 AND P=2 AND LEFTHAN,21>"FIRE"
" AND LEFTHAN,21>"HIT" AND LEFTHAN,21
">>"HIT" THEN PRINT "You can only fight"
GOTO 346
229 PRINT:FOR I=N-8 TO N-1 TO 25:IF CEN
TH=LEFTHAN,21 THEN M=I:T=23
230 M=I:T=23 THEN PRINT "You cannot
go there":GOTO 346
231 IF LEFTHAN,21="INV" OR LEFTHAN,21=
"FIRE" OR LEFTHAN,21="SCD" OR LEFTHAN,21
>"SCD" OR LEFTHAN,21="JUH" THEN GOTO 3
32
232 P=INVENTORY,:T=INVENTORY,GOTO 231
233 OF VOB AND J=8 THEN PRINT "This case
and what he followed by an object":G
OTO 346
234 M=I:FOR T=1 TO 10:IF CEN>LEFTHAN,21
-21 THEN M=T-19
235 M=I:T=23 THEN PRINT "No such obj
ct":GOTO 346
236 ON V GOSUB 238,238,1028,428,428,428,
428,428,428,428,428,428,718,718,718,718,
718,718,718,718
238 PRINT #1,"PRESS A KEY WHILE INVENTO
RY IS UNBOUND 1,2,3,4,5,6,7,8,9,0
GOTO 346
239 REM TAKEAWAYICK UP
240 OF GIN,11=8 THEN PRINT "Fool, you are
already have it":RETURN
241 IF GIN,21>=1 THEN PRINT "You cannot
take more than 1/4's for too large":RETURN
242 IF GIN,21>=2 THEN PRINT "You cannot
take a creature either alive or dead":RE
TURN
243 IF GIN>11 THEN PRINT "It's not ne
cessary to take":RETURN
244 IF GIN,11>0 AND GIN,11>P AND GIN,11>=A
N E AND THEN PRINT "The vase is safely car
ried on the vel-vet-cushion":GOSUB,21>=GIN,
11:RETURN
245 IF WAD AND GIN,11>P AND GIN,11>=A
N E THEN PRINT "You can only carry the vase for a
certain amount":GOSUB,11>=WAD,11>=GIN:RE
TURN
246 GIN,11>=WAD,21>=P PRINT "You have to
take the object":RETURN
247 REM DROP/LEAVE
248 IF GIN,11>0 THEN PRINT "You don't h
ave the object to drop it":RETURN
249 IF WAD AND GIN,11>P THEN PRINT "The
vase safely drops on the cushion, soccor
y: then safely, just TAKE CUSHION":GOSUB,11>
P,11>=P:RETURN
250 IF WAD AND GIN,11>P THEN PRINT "The
vase breaks as it hits the floor":GIN,
11>=WAD:RETURN
251 GIN,11>P:PRINT "You drop the object":
RETURN
252 FOR LIST:INVENTORY
253 CLS:PRINT#1,PRINT TAB(10);"POKECH CAR
REPO,11:PRINT#1,PRINT#1:FOR T=1 TO 1
AND IF GIN,11>0 THEN GOSUB:PRINT#1,T:END
254
255 REST:RETURN
256 REM EMPTY
257 IF AC>100 THEN PRINT "You cannot eat
so many":RETURN
258 IF GIN,11>0 THEN PRINT "You don't
have the bottle, I'm afraid":RETURN
259 IF P<27 THEN PRINT "The liquid has
a small hole in front of you":GOSUB,11>

260 P=10,1>=PP:RETURN
261 PRINT "The poison lands in the stro
e and will kill all those at the Castle."
GOSUB,11>=PP:GOSUB,11>=PP:GOSUB,11>
=PP:GOSUB,11>=PP:RETURN
262 REM LIGHT
263 IF GIN,11>0 OR GIN,21 AND M=GIN THEN
PRINT "You can only light the lamp who
ch must be with you":RETURN
264 IF M=10 THEN END:PRINT "The light is
nothing off":RETURN
265 PRINT "The lamp is on, you can see a
bit around you. To switch lamp off, enter
L LIGHT OFF":RETURN
266 REM FIGHT/SCD/SCD
267 IF LEFTHAN,21="HITS" AND M=11 AND P=
22 THEN PRINT "The panel breaks revealin
g a secret passageway, centuries old
":GOSUB,21>=M=11&P=22="a sealed panel":GOS
UB,22
268 IF M=12 AND M=23 AND M=24 AND M=25
-17 THEN PRINT "You violent person! For a
fact, I'll make you start again":WHILE 10
=10:WEND:RUN
269 IF GIN,11>P THEN PRINT "How can you
fight something that isn't here":RETURN
270 IF M=17 THEN PRINT "You stood so cou
rage against that army":RETURN
271 IF M=18 OR M=19 OR M=20 AND GIN,11
-18 THEN PRINT "Without any weapon, your
fight was long and arduous":WHILE 10
=10:WEND:RUN
272 IF M=12 THEN PRINT "You kill the en
emy easily":GOSUB,11>=PP,M=12,11>=PP:GOSUB
273 IF M=13 THEN PRINT "You kill the tro
op after a fierce battle":GOSUB,11>=PP,M
=13:GOSUB,11>=PP
274 IF M=14 THEN PRINT "You only managed
to wound him":GOSUB,11>=PP,M=14:GOSUB
14:WEND:RUN
275 IF M=20 AND GIN>11 THEN END
276 FOR T=1 TO 7:IF GIN,11>P,T>=11:REST:RE
TURN
277 REM OPEN
278 IF M=24 THEN PRINT "You can only open
the chest":RETURN
279 IF P=25 AND M=24 THEN PRINT "There is
no chest here":RETURN
280 IF GIN,11>P THEN PRINT "You are eat
ing something":RETURN
281 PRINT "The chest opens to reveal a V
aseworth,11>=PP:RETURN
282 REM SCORE
283 PRINT#1,PRINT "POINTS TAKEN":HREST:RE
TURN
284 REM QUIT
285 GOTO 1000
286 REM DRINK
287 IF M=5 THEN PRINT "There's nothing t
o drink, it's empty":RETURN
288 IF M=25 THEN PRINT "You cannot drin
k that":RETURN
289 IF M=26 AND GIN,11>P AND GIN,11>
P THEN PRINT "It's not here to drink":RE
TURN
290 PRINT "You drink the liquor in the b
ottle, you didn't know that it was a poi
sonous potion":GOSUB,11>=PP
291 REM END
292 IF M=21 THEN PRINT "Are you mad? Yo

**C64**

Compute!s Third Book of Commodore 64

This is a batch-pocket of programs and created — mostly the former — many of which were originally published in one of the better American computer magazines. It is definitely a book for home users, as there are a lot of utility programs. The programs include a machine language editor and a profector, to make protection easier as possible, but you will still have to put in a good many hours at the keyboard if you want to make the most of that selection.

There are some advantages, though, to buying your programs in book form. The price is over £10 less than — you get over 20 programs for disks more than the price of one cassette. The range of programs offered is another good point, as they include utilities and educational programs as well as the usual games. You also get a lot more background information than the average cassette may offer, complete with hints and advice on writing your own programs or modifying those to suit your purposes.

The book is split into five chapters, the first being all BASIC programs — mostly, rather than listings — and the others covering education and applications, education, sound and graphics, and utilities. The programs include a cassette graphics converter, a program designed for the keyboard to allow parallel-controlled programming, Screen 80, which is of course suggests graphics, an 80 column display, and a paintbox program.

A good buy if you have a taste for efficient programs and a lot of spare time. M.W.

Price: £10.95

Publisher: Compute! Publications

Distribution: Holt-Sawyer, 110 Acorn Rd., Buntingford, Herts SG9 9EN. Tel: 052 321 2111

C64**C64**

Advanced BASIC and Machine Code for the Commodore 64

This book is mainly an introduction to machine code and assembly language. The first two chapters give some techniques used in BASIC programming, while the remaining six chapters are devoted to machine code. The third chapter gives examples of how to speed up your BASIC programs and use up less memory. The second chapter describes how to write a database program by giving the various routines involved and describing in function list by list.

The machine code section starts off by giving you an example of how fast machine code is compared to BASIC. It then continues to introduce the 6502 command set and the flags and registers used by the processor. As you continue the various forms of addressing are introduced and explained. Some of the final examples explain how to use block address, indirect, multi-page and direct.

Throughout the book you are building up a small simple arcade game map by step. Sections of the programs are re-written to be faster and more memory efficient as you learn of new methods and constructs.

The book gives a listing for a monitor program which includes an assembler/disassembler along with the usual monitor facilities. There are various memory maps and tables included in the back of the book for reference purposes.

It is obviously well written although the example programs won't let you feel reassured. This is quite a tall task for a beginner who would really need to use the functions of all the commands in detail. K.I.

Price: £6.95

Publisher: Deckworks

Address: The Old Pump Factory, 48 Gloucester Quay, London NW1

C64**AMSTRAD**

Machine Code for Beginners on the Amstrad

A member of the "Golden Master Book of Machine Code for Computer Games and Logic Games on the BBC and Doctor Who's Computer" books, this is definitely useful. In fact, I haven't seen a ready made machine code book that's been to be very good with books.

On that note Steve Kramer's offering "Will it do the trick? Yes... and no has to be the answer here. It certainly doesn't take you from the very beginning, getting you to write every single example in the first few pages. The style, however, varies from some rather convoluted explanations in the "here... that wasn't very difficult was it?" type of manner.

It's clear that Steve has tried hard to make it stay within reason anything out, but on occasions there are exceptions as he leaves us hanging. The trouble is that the subject matter is so derived abstract that even with the extensive diagrams and assembly, which it's very hard work. To give him his due though, he hasn't just taken a stock 208 programming book and turned it up for the CPC64, this book is pretty much specific.

In order to make the best use of this I feel you will need to buy an Amstrad/Master/Maxx program, Assembly's a £14.95, making a big financial commitment to your learning. I can't really advise you to make a start unless your BASIC programming is of a very high order, and you have the ability to understand the standard manual from cover to cover.

B.M.

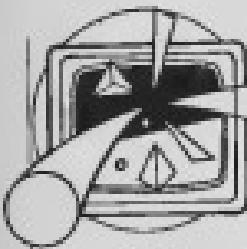
Price: £5.95

Publisher: Micro Press

Address: Castle Hill, 27 London Rd., Tenterden, Kent TN2 1JN

AMSTRAD

GRAPHICS PACKAGES



Shingo Segura
gives you the
low-down
on graphics
packages currently
available for the
BBC

What better way's there to learn as much CAD or 3D drawing system software, computer graphics is one of the more interesting aspects of computing. The BBC has great potential in this area. The following packages seem to meet that demand; however, some may be built up. If you're interested in CADs, you can buy the available British Systems but if you simply want to draw off your artistic jones and doodle, there is a wide range of drawing packages. The quality ranges from amateur to expert. In this article, I have looked at a variety of packages.

Drawing packages — Dog-style
With this package, you are limited to MODE 2. It needs much room to be layed out through the screen, even though the resolution is 640.

When the program is first runned there are two modes — draw mode and "image" mode. In draw mode, it is a dither as you move the cursor and in image mode, the cursor may be moved without destroying the background. You are warned to find that there are no rubber banding facilities in completing the drawings, which in itself is a very inconvenient method for drawing closed shapes.

There are the usual facilities to draw rectangles, circles and ellipses. Unfortunately, the processing of these objects was very cumbersome and accurate positioning was impossible.

One facility which I liked about this package was the facility to zoom in. Since the program is written in machine code, the fit was quick and choosing the fit option (including shaded) was reasonably easy.

All the procedures for this rather simple package are on a small tape card. Needless to say, it was not very comprehensive and I don't recommend this package very highly.



pic's Art Bridges

Art designer — pic's

In this package, you are limited to MODE 2. There are the usual facilities to plot points, draw lines, close curves and ellipses, draw rectangles. However, an inauspicious omission is the lack of rubber banding facility. Although this, there is no choice of pen setting in the set-up, nor is there the use before pen facility. In addition, surprising omission is the lack of a flood fill facility. There are some very useful features, the most useful of which is a facility to print a testbed at the current cursor position, something gimmicky.

The major feature, however, the whole package is badly designed. For example, if you go back to the main menu, your pictures are lost! Also, most of the options are chosen by pressing a combination of CONTROL and key. Why not use function keys to start some?

This package also includes a character designer, the sort of program you would use in book design. There is no facility to define part-coloured characters or facility to save the character in the form of BASIC lists.

As you might have guessed by now, this drawing package is rather limited.

Artist — Picsoft

Drawing is based on MODE 2, but this particular drawing package is characterised by its extensive use of little pens to draw the various shapes. These are completely available on both sides of the screen. Although this limits the use of pens, it is very user-friendly.

All the usual features are here — like plotting points, rubber-

banding, flood fill, which allows you to fill in shapes as well as pens coloured, facilities to draw triangles, rectangles, circles and ellipses. Also, there are facilities rarely found on cheap drawing packages. These include block copying, capturing a section of the screen, reflecting a section of the screen, reflecting and rotating. Because this program is written in BASIC, these facilities are partially user but nevertheless, it's nice to have them. On top of all this, there are some very unusual features such as the "testbed", which allows you to fill an area of screen with random dots and a facility to define characters within the screen without destroying the main picture.

Lack of keyboard facilities and the fact that you can only draw in MODE 2 were irritating factors, the drawing package is very good value for money and is safe.

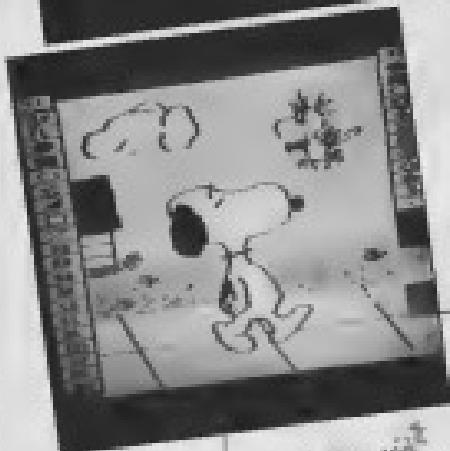
Autodesk — Peter Shergill

Programs produced on BBCs are characterised by their solid nature. This particular package (available only on disk) is very difficult at this stage. It allows you to create drawing tools as those produced with PC programs.

When the main program is entered, the cursor may be moved about the screen and a dialog of paper may be deposited at the cursor position by entering a certain key. The size of this paper may be varied by changing the size of the paper width. As you can see from the previous pic, the possible effects are amazing. However, the actual graphics process is correspondingly slow.

GRAPHICS

Peter's Art3D



and there are even features to help you along. As it stands, a competent programmer could easily write a similar program in BASIC, but as I say, the package is definitely commercial. Nevertheless, I did like the effects which are possible with this package.

All designs are All Designs

It is obvious that a lot of thought went into the design of this software. But it soon, MODE 0 and MODE 1 are used for drawing and low resolution MODE 2 has been left out. Also, portrait option has been left out in favour of the much more popular landscape orientation.

The top two lines are used as a menu window.

The cursor is moved about the screen via the cursor keys

and four different speeds have been provided. When drawing, there is the usual rubber banding feature, together with facilities to draw lines between two set points and a facility to draw a line as you move the cursor.

Of course, there are facilities to draw circles, ellipses, rectangles, triangles and polygons too. Also, there is a 3D facility which allows you to create shaded or colour very easily. You can choose an area of the screen, repeat an image and there's also a very powerful facility for drawing 3-D images by means of perspective lines, perspective shading and hidden line removal. Although it's difficult to see, some shading effects are possible.

This is exceptional software accompanied by a very well written manual. I can't do full justice to it as such a short review but needless to say, for those seriously interested in computer graphics, the choice is obvious.

AM3D Art or AM3D

This is rather different from the others since it is written especially for the AM3D monitor.

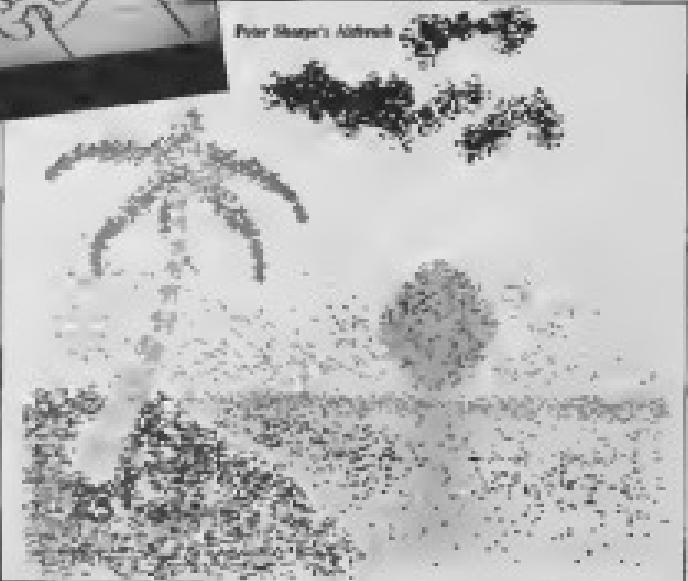
but I just had to include it in this article because it is superb!

A mouse is a device which may be rolled about an even surface in order to control the cursor. In this drawing package, the shape of the icon under your cursor specifies which mode you are in. For example, if you are currently in rubberbanding mode, your cursor is held poised. The main screen shows a drawing board surrounded by the various tools. At the top of the screen, there are four more options which are rolled up in the form of windows.

During execution, multiple rubber banding, spiro, pens, eraser and facilities to draw rectangles, circles, etc etc. In fact, all the usual functions are built in more.

However, it's not the number of features which makes this drawing package so fantastic, it's size of say, 10K. yes like drawing with pencils or feathers! Alternatively, this drawing package only allows you to draw in MODE 0 so you can't use any colours, but all in all, this is an excellent drawing package accompanied by a beautifully presented manual.

Peter Sheep's Artbreak



We have seen, I think, many people would be happy with AMX Design as a delivery package, although it is rather expensive and does need some drivers. If you however want further, you should seriously consider the AMX system, not as a delivery package, but as a very exciting product.

Graphics Package: CPM Aug-
Sys, Mulberry Ave, Clifton
H, Liverpool L1 9JW

Art Director: Bill W. Pro-Supply
of Brookline, Pennsylvania, Test
Model 200.

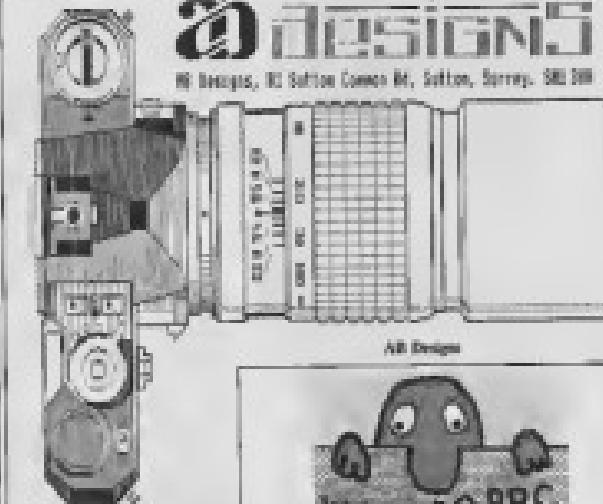
Meyer Anton E1 50, Persian Systems, John Street, Woodbridge, Suffolk IP12 5LT

Aurich 17.91 Peter Stange
Büf fingen, Arnsdorf, Schaffhausen/
Schaffhausen, Germany 17.91 146

AB Design Ltd AB Design,
37 Design Crescent Rd, Sutton,
Surrey SM1 1PF.

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10 of 10



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Annex notes welcome

and were not offered without its participation. [142]

ANIMATING YOUR CHARACTERS



Now that you can redefine characters Shingo Sugihara shows you how to make them move

Being able to redefine characters (including the alphabet) is all very well, but how about more movement? In this article, I will deal with simple character movements. Redefining character sets is another topic (shown in the first of this series) and we will manage to move the others about the screen.

The easiest way to provide assistance is the PRINT statement to display the character, read it out and then

relationship at another position. This provides the basis for covariance. To prove a covariance at a specific position on the array, there is a command **CAM** which stands for TAKEN AT POSITION. If you have some hyperparameters, you can probably prove that it takes you to the right address. For example, **LOAD** **DATA** by typing **LOAD DATA** **AT** **POSITION** **1** and see

RIGHTSTAKERS

You will see that the character is printed out in the column 10 characters from the left. The number in the bracket specifies the column at which you want to print your character (remember that the first column is 0 in this case). The number of columns in a screen depends on when MODE 0 you are not in MODES 0 and 1, there are 80 columns. In MODES 1, 4, 5, 6, there are all 80 in MODES 2 and 5, there are 20. Using TAB allows us to position a character on a line, but how can we print the character in the middle of the screen? You must specify at which column and row the character should be printed. To do this, we need a second parameter in TAB in the form (TAB, C, R). As before, C is the column number, but this is the second number in the row. Type in

PRIMERAS LECTURAS

The slices will appear roughly in the middle of the screen. If you know the current co-ordinate system, you could shift all the Telli parameters as the X and Y co-ordinates, except the origin is assumed at top left hand corner as shown in Fig. 1.

Using TAB in this way allows us to print a parameter at any position on the screen, so as to edit its value. When we move left to right on the next row, we can employ the method described earlier in a program.

```

10 MODE1
20 FOR X=0 TO 39
30 PRINT TAB(0),HICHRDN(X)
40 PRINT TAB(0),HICHRDN(X)
50 NEXT X

```

The mind is certainly moving, but it is far too fast and is nowჩხარის ხოლო? The blinder is due to the fact that the human eye cannot register the vibration fast enough. The solution is to put a small delay in line 40 in the form

ANSWER: A = 1.721 (100% CERT.)

One problem is, the characters are very small. In a 4x8, you can hardly display four text strings identically, can you? How about displaying different characters by putting several characters next to each other? We will accomplish this by just shortening the text strings. In the main menu, type in "Testing 1" and see how it looks.

JOYSTICKS

Take your pick: the Arcade or two versions of the Kempston joystick. HCW experts tell you what they think.

Arcade

Flooded with the standard seven D responses and about one more of lead, the body of the Arcade is finished in black ABS plastic, shaped roughly like a domestic pen. A single body mounted leverball at the sharp end makes it equally suitable for right- or left-handed use, but the absence of a stick-mounted button makes it less than a true joystick joint.

Surprisingly, on the face of its three very small rubber pads fixed underneath, the Arcade moves about very little in a result of its low centre of gravity, though the pads really should be larger. For hard held use, a small depression at the front allows the two raised buttons perfectly — not bad, but not quite right.

The middle portion of the solid and stubby central vertical axis, also terminated by a ball small enough to be gripped with thumbs and forefingers, but large enough to bypass the pads of the hand. The sleek Cooper's arm is bent on the body which, when removed, reveals a very tight instead of松散的 construction. The body itself contains a substantial rubber suspension cord, housed in the shaft, and to the body, and it is this which gives both smooth movement and a positive centre action without being loose.

Beneath this, situated in the shaft, is a circular mounting disc which measures movement in four four-quadrant positions where needed, mounted on a high quality metal bearing. These are replaced in the event of damage, though the same unlikely, and give a very positive click when rotated a mode. The mechanism is entirely sprung. Finally, at the base of the shaft, an extension of the mounting disc houses a depression, pointed into the base in the form of the shape of an eight pointed star, thus giving clear directional feel. The

buttons are breasted over the body, then recessed in a project plug which fits into a recessed socket.

In all, the Arcade is equally responsive, though, as with any new product, it takes a little time to get used to it. Control is solid, clean and decisive, with a minimum of movement, and the distinctive short, clearly spaced, contact. Furthermore, action is consistent, though a bounce on the stick itself would have been welcome.

Joysticks are often either tough or sensitive. This one is both. Well worth checking out. **GR-M**

Price £19.95

Manufacturer: Sunex

Distribution: Eurotech Electronics

Address: Platford Ln, Broxburn, H. Midlothian, KY14 9XR

Model: Standard analog D pad joystick port.



Kempston Joysticks

As Kempston has always been at the forefront of the joystick field, I was eager to see on the latest two offerings in its joystick range, what work with the Amstrad, C64, Spectrum and Amiga computers.

The Formula 1 joystick is now the flagship of the Kempston range. To my mind it is distinctive in an unorthodox manner. When I first opened the box I was nearly ill as it is moulded in pale blue plastic with huge white buttons.

Holding repeated nose positions I examined the Formula 1, as far as I could see it was identical to the older Competition Pro joystick. The difference became apparent as soon as it swapped the sticks. It made lots of really violent jerks produced by the two microswitches which Kempston has used in place of the previous flat switches.

Being so surprised at first, I passed off the use of these micro switches as a quirk, and a silly notion. It wasn't until I began to play games with the car stick that I appreciated the quite substantial difference the switch made.

I found that a was no longer necessary to keep the stick turned over in one side to ensure that the spectrum's competition to move in that direction. The middle click and the front fed of the stick depressed, might the Formula 1 a launch player's dream.



Formula 1 joystick

Kingsgate Formula 1 and 2



The Formula 1 is also decked out in the colours of the Kingsgate motor racing team; however, this is the only similarity to the Formula 1. The handle is a long, rubber-like, plasticine design with a fine texture on the top. Two more fine buttons are provided on the base but these are a little too close to the centre to be reached easily.

The base is fitted with suckers and I would recommend that they be used because as a handheld product it is a disaster. Should you hold the base in your left hand and attempt to move the stick to the left then you will have difficulties. The base will prick your hand before reaching the limit of its travel.

I have never used such a steering wheel as it can be moved from left to right through a distance of about 7° on without the program requesting any movement.

I would definitely recommend

that you pay the extra for the Formula 1 instead, a clever machine.

£24.

Price: Formula 1 £14.99
Formula 2 £13.99

Manufacturers: Kingsgate

Address: 2007 Way, Webbs
E.C. 100 Bus. Kingsgate ME42
TA5



Formula 1



Formula 2

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**IF YOU USE YOUR COMPUTER TO
PLAY GAMES, THEN YOU CAN'T
AFFORD TO MISS.**

Computer **Gamer**

This fantastic new magazine appears on March 22 1985 and on the fourth Friday of every month after at the price of 25p.

Each issue will be produced in cooperation with Ezzean our Interplanetary Adviser who on his home planet, Aargon, is a member of the Association of Supreme Players. He will be monitoring developments in the games industry and advising Computer Gamer readers with all their gaming problems. Included in each issue will be pages of review of the latest games releases, special Adventure features and a help-line, invaluable articles on how to 'crack' specific games a high-score page, exciting programs to type in for most of the popular home computers, news, competitions, reviews of peripherals and computers themselves if relevant to the games field and LOTS more.



Also, all readers of Computer Gamer will have the opportunity to join our tremendous Reader's Club — each member will receive a membership card and a regular newsletter which will contain up-to-the-minute news and all sorts of offers on a variety of products.

So all-in-all there's no way you can afford to be left out of the great new revolution in games computing — rush out and buy your copy NOW!



West Chipping Norton,
Nr. Cirencester,
Gloucestershire GL7 3AB.

Wild Justice Society

Since the company power marker is now at a peak, it is interesting to see the wide — and real — variety of directions on cancer information and on the prevention

I remember some three years ago several letters appeared in HCN criticizing these discussions and saying that they give a false impression of the number of the people who --

Recently I visited several
of these. The older ones
feature the thing we've all
been clamoring for—
news sheets. Unfortunately
for my purpose, they have
essentially the opposite of the
desired effect. Oh, they show
what you're getting, but
in a collection that looks
pretty unconvincing.

With the game, nothing up to a dozen or two to have something good to play and something new, which is 100 games seems like a lot. Based on the success in solving an illustration with one of a screen from the game — the more of the better screen.

Some still shots have arrived — New Generation and photographs which are very unattractive. Also open discussions are obviously not our forte. — Can you think of something?

What I'm really going to do is the fact that it would be a good idea to have someone involved in the game plan. Most referees under enough pressure. Not only do they want to become part of a better refereeing, but we've got a bigger way to cover the bases on the packages.

What's New

Overall I am pleased with the new book. The only downside I thought was the odd choice of cover image. I'm glad to see you have returned to the older style layout and are incorporating more photographs. The update sections have improved and I like the way the packaging is displayed although a second shot of some of the home-grown would be a welcome feature.

I have found your bank
very good and most interesting.
Very enthusiastic. I am

Loading problems — solved

I purchased an American CPC-100 about two months ago. I am very pleased with its performance, the range of influence is increasing all the time, and generally I am very satisfied with it.

However I feel I must complain about the Virgin's memory. I especially purchased a copy three weeks ago. This caused me one week of the tape, but not the other. I returned the tape to the supplier, who charged me. This case passed "judicial" to local or other officials. I again purchased the tape, and it was never used. I then wrote a 20% discount to the supplier, but still I had no reply.

"I have not used the replacement funds of money from my original neighbors to do further personal laundry. The funds can't be used because all other software costs \$40, one program may possibly be based on the computer's hard disk instead of memory.

Created - 2010-01

I am a 12-year-old owner of TI-99/4A which I have had for six months. I am writing my own software for it. I am a complete idiot at every task in creating software. I can't even figure out how to make a program run.

Table 2: Descriptive statistics

Mark Borchardt, *Editor-in-Chief*

A spokesman for Virgin said: "The problem is that some of these users have been experiencing on the East Coast problems of what is now known as a 'load-shed' system. We never had any records broken or even slightly out of line, so much so, that I hope we'll spend all kind."

"To estimate the value
now-reduced price required of
bromine, which has just been
on the market, and a statement
as to the color. The problem
is interesting — we have
had about 20 pages prepared
as of general discussion."

"Lord Balfour should not be game directly here to us and we'd replace him. Whenever a new man gets into office and has problems he's bound to, and the sheep-herder has to replace it several times, the new should start and the game is at, since the sheep-herder may not know how to solve modern problems."

Wright, B-H Warren Rd.
Porterville Rd. London KY
304

I would like to get in touch with someone who has a TI-83.

Paul Lovell, 100 Beaufort
Square Rd., Wards, Weymouth
Dorset DT3

and always on the graphics would mean the game was better.

I know there is a problem in managing like HCA has been doing would make the program fail completely.

www.scholarone.com

We're on the board of a different company, but we keep up the interest. So we're interested in compensation. Based on performance, but the ultimate possibility is stock options.

TOP 20

Compiled by
Gallup

SOFTWARE

Fortnight Ending April 2, 1985

New Chart

This week is the first time we will be running the new fortnightly Gallup chart. The parents that do — College, COMM, COMM, Am Prodigy and the Computing Services Association — got together and decided that the chart should now be expanded on a two-weekly basis.

The reason for this is that distribution ordering is done each fortnight. So that more credibility will be attained, the Gallup chart will now be issued to users with their distribution orders.

The Gallup chart is also being featured on BBC's Saturday Super Show — so watch out for it!

Rank	Title	Platform	Am Prodigy	COMM	COMM	College	COMM	Am Prodigy	College
1	Soft Aid	Various	•	•	•	•	•	•	•
2	Spy Hunter	IBM PC/CD	•	•	•	•	•	•	•
3	World Series Baseball	Intergen	•	•	•	•	•	•	•
4	Glacierblaze	Macintosh	•	•	•	•	•	•	•
5	Photo Lab	IBM PC/CD	•	•	•	•	•	•	•
6	Football Manager	Amiga Games	•	•	•	•	•	•	•
7	Impossible Mission	C64	•	•	•	•	•	•	•
8	Kidnapper Mission	IBM PC/CD	•	•	•	•	•	•	•
9	Combat Zone	DosBox	•	•	•	•	•	•	•
10	Everyone's a Wally	Macintosh	•	•	•	•	•	•	•
11	Air Wolf	DosBox	•	•	•	•	•	•	•
12	Pole Position	Atari	•	•	•	•	•	•	•
13	Moon Gooze	Intergen	•	•	•	•	•	•	•
14	Flakka Keepers	Macintosh	•	•	•	•	•	•	•
15	RockMaster	Macintosh	•	•	•	•	•	•	•
16	Crash Quest	Mac Power	•	•	•	•	•	•	•
17	Jet Set Wally	Amiga Projects	•	•	•	•	•	•	•
18	Alien 8	Ultimax	•	•	•	•	•	•	•
19	Betty	Protek	•	•	•	•	•	•	•
20	Elite Officer	Broderbund	•	•	•	•	•	•	•

SPECTRUM

Top Ten

- 1 Soft Aid
- 2 Spy Hunter
- 3 World Series Baseball
- 4 Glacierblaze
- 5 Photo Lab
- 6 Impossible Mission
- 7 Kidnapper Mission
- 8 Combat Zone
- 9 Everyone's a Wally
- 10 Air Wolf

BBC

Top Ten

- 1 Soft Aid
- 2 Spy Hunter
- 3 World Series Baseball
- 4 Glacierblaze
- 5 Photo Lab
- 6 Impossible Mission
- 7 Kidnapper Mission
- 8 Combat Zone
- 9 Everyone's a Wally
- 10 Air Wolf

COMMODORE

Top Ten

- 1 Soft Aid
- 2 Spy Hunter
- 3 World Series Baseball
- 4 Glacierblaze
- 5 Photo Lab
- 6 Impossible Mission
- 7 Kidnapper Mission
- 8 Combat Zone
- 9 Everyone's a Wally
- 10 Air Wolf



**Solution**

As the search of 2 and 4 suggests, simply change the places of numbers symmetrical to opposite through the centre, i.e. 10 and 3, 14 and 2, 8 and 12.

16	3	2	13
5	10	11	8
12	7	6	9
1	14	15	4

Hollers for help!

Major T. J. Hobson, BEM, MBE, would like to have details of a UK supplier of software and hardware for the Amigaon computers which he bought recently.

VIC 20 owners who can help David Collier of Bedford please contact us. He wants a library of disc shooting and a disc and tape racing game for his machine. If you have one ready to publication perhaps you could send it in.

A. W. Jeffs from London is looking for a colour which will allow him to have two images simultaneously on the screen. Any ideas or comments will be welcome. The images must be able to coexist harmoniously when full oil is set on picture.

Finally, we receive from our advertising liaison 10-15 messages about Amiga so far. Most are passed on to PCW Ltd. An explanation of the Amiga's life is not part of the Amiga's life at all, the part of Amiga's life.

If you have any questions or answers please send them to Western Peer Media Consulting, Weekly, 10-12 Golden Sq, London, WC2R 3AB. We will print them as soon as possible and we will try to pass on answers to the author of the question. We won't print your full address unless you ask us to do so.



Personality pic: R. Horne is a 31 year-old family man from Thetford. He says he has BBC, which he's had for 18 months, to play non-stop adware. He worked up to the BBC from a household C64. His local journey was a ZX81 and Dragon 32.

Reader's income table

Name	Grade	Machine	Rate
Karen Leman	Houseshell	C64	£164,200
James Higgin	Cloudy Egg	BBC	£14,400
Robyn Aspinwall	Pols Paradise	32	£9,210
Paul Crossley	Booztastic	C64	£164,200
R. Horne	Coolie Queen	BBC	£990

Reader's jokes

What do the people in Tidbin have to do?

Swans with Amiga

Other Swans, where

Where do you put a monkey with a keyboard?

Elbow, Derby

Mobile aged lady: Young man, I want to purchase an Amiga Spectrum.

Answer: 4032.

Mobile aged lady: gods! The 21 years of age and my name's Alice.

Eric Williams, Bedford

**Talk back**

I am the chairman of Masters responsible for our first computer (PCW) 100.

I read with concern Sington in the next issue magazine. A former member of published organisations is forced to improve the standard of the rest, and this must be to the benefit of the farming public. There has been such a plethora of games in the past few years that a game deal of care and study of your creation has been necessary to ensure good value for money.

There are many more important issues on each user, and games are no exception. A high selling piece of software. This is already an endeavour particularly among advertising agencies, where a few well written software firms have a very high percentage of the available market. Certainly my C64 is very well supported.

Good luck with your latest magazine.

The Band's On The Run!

... 7 busy characters, 10 lost chords, 15 hours, 48 Traffic Wardens,
95 London Tube Stations, 126,720 square feet of London,
7 million Londoners ... 943 action filled screens.

PAUL McCARTNEY'S *Give my regards to Broad Street*

BROAD STREET

The new single is missing and the band have
got one hour in the weekend - leaving you
just 15 hours to recapture the missing tape.

A race against time around London to
find each member of the missing band.

You have to search out the bus
conductors, wardens and traffic A
clever strategy game, full of
entertainment, brilliant graphics
and all presented with
McCartney's music.



MIND GAMES

Argus House, 57 Beresford Road, London SW17 0JZ
For the Spectrum and Commodore 64

A Virgin Interactive Product. MFP Smith, Manager, London
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DAILY EXPRESS
'Gunning'

BLAGGER GOES TO HOLLYWOOD



Has your Blagger little bird ever thought about the impact the game can have on the world? Now you can! With the help of the Blagger, Blagger has learned the way to fame and fortune and success... but it's not easy to make the most money possible on the big screen. Blagger has managed to break the rules of the game to become the world's greatest player.

Accomplish missions and collect coins while fighting off the forces threatening the city - going back to the playground and other weird businesses in the unique case of this exciting puzzle game.

Blagger is perfect for you!

Each screen image represents
only 1/10th of total playing area.



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In classic movie tradition, simulated 3D and big sound soundtrack with 4 way scrolling action